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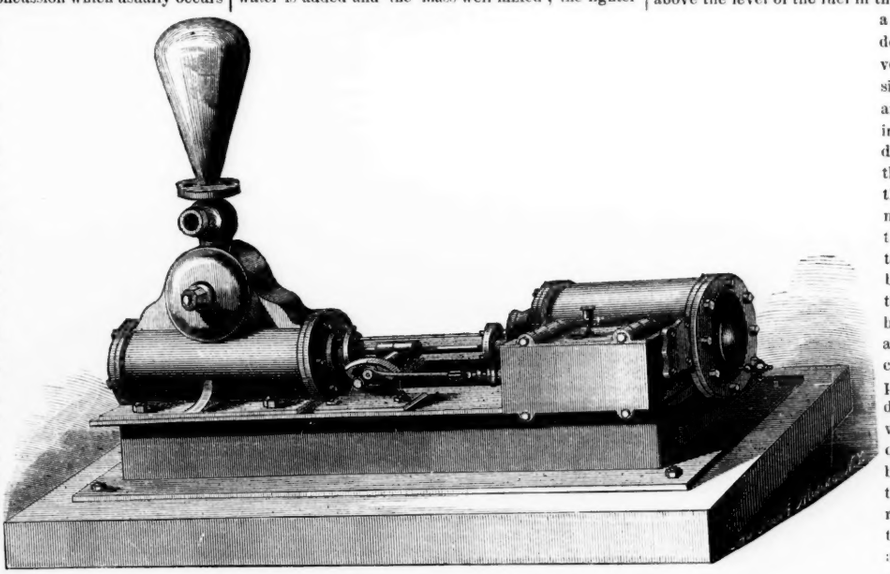
STEAM PUMPS.

The accompanying excellent illustration represents Messrs. Guild & Garrison's Patent Improved Direct Acting Union Pump, manufactured at their Steam Pump Works, 55 and 57 First street, Williamsburgh, N. Y. Mr. William H. Guild, one of the partners in this well known firm, has brought to bear upon the manufacture of these pumps an experience of over thirty years, the result being the subject of our illustration. Among the advantages claimed for this pump are the following: It is direct acting, the valves being moved by a lever, the concussion which usually occurs by a blow on the valve rod, in this class of pumps, is entirely obviated. It has a positive motion, starts at any point, and is as reliable in regard to its action as any balance wheel pump. The valve motion is constructed of solid wrought iron, having no screws or keys that can become disarranged or broken. The cylinders are packed with metallic packing, and the valves are of the best steam metal, on steam metal seats, and, consequently, not liable to corrode or be eaten away by mineral or acid water—a point which will recommend their use in mining regions.



GUILD & GARRISON'S DIRECT ACTING UNION PUMP.

At the present time there are 12,000 miles of railway in work in Great Britain, and the number of passenger carriages with which they are worked is about 15,000, and of wagon stock upwards of 200,000.

Cheap Coal for Winter.

The Philadelphia *Gazette* says of the prospects for cheap coal: The shipments from the Schuylkill region, although considerably lessened within the past two weeks, as compared with those previous, still continue too heavy for the present state of the market, and until something is done to check them, the trade must remain in its present depressed condition. In some of the Eastern markets we are informed coal is refused at any price by the dealers, and that lately shipped from this port under consignment, with the expectation of its meeting with ready sale, still remains unsold, and in all probability will result in a total loss to the consignor. About one-fourth of the operatives in the Broad Top region are at present idle for want of a market. At the rest, work has been resumed, and they are now sending nearly eight thousand tons to market per week.

The Horn Test.

I have often wondered, says Major Rickards, in his "Mining Journey across the Andes," at the quickness and precision with which the South American miner assorts and determines the various qualities of ore, by simply a rapid glance, without a lens or other scientific aid to assist him. Rarely, if ever, can a piece of ore containing metal be found among the rejected piles of *desmontes* surrounding a shaft's mouth. In the case of metallic gold he will seldom be far wrong in his assays; indeed, I have frequently seen old miners with the "poruna" obtain more accurate results than the majority of *passed* assayers in Chili. The mode of using the "poruna," or horn, is simply to take a handful, or weighed quantity, of the finely pulverized ore and place it in to dry, then a little water is added and the mass well mixed; the lighter particles, mud, &c., floating, or being held in suspension by the water, flow off, leaving the metallic matter at the bottom, mixed with the coarser grains of the "gaugue" or matrix. These, in their turn, are removed by repeated doses of water until eventually the metal sought for alone remains in the angular hollow of the horn; when, by a peculiar sort of percussion movement, given by striking the horn against the palm of the hand, the heavier particles sink, and by moving the water gently over their surface, to remove any remaining guague, and retiring it farther towards the point of the horn, the gold, &c., may be seen in a long narrow band on the bottom, by the length of which the miners are enabled to judge of the richness of a sample. They frequently calcine the crude ore before operating upon it with the "poruna."

Combustion of Fuel in Furnaces.

An improved apparatus for economizing and inducing more perfect combustion of fuel in furnaces has been invented and duly patented by Mr. Thomas Lancaster, of Bootle, near Liverpool, engineer. In boiler and other furnaces with fire-grates, doors, and ash pits of any of the ordinary kinds or arranged in any usual way, the combustion of the fuel therein is not at all satisfactorily accomplished, for not only does a considerable proportion of the sensible heat evolved pass up the chimney, but large quantities of black smoke, capable of giving out under proper treatment much heat, are conveyed away and discharged into the air, to the annoyance and it may be damage of the health of the public. The objects of these improvements, therefore, are to economize fuel, and at the same time to prevent the emission of black smoke, and these objects are to be accomplished by causing atmospheric air to enter the furnace by means of an apparatus which the inventor thus describes:—"Over the door of the furnace, and above the level of the fuel in the fire-grate, there is a curvilinear pipe or deflector, which conveys air from the outside of the furnace into and over the fuel therein, preferably in a downward and towards the back direction. At the back of the furnace near or in the bridge, there is a chamber or there are chambers fed by pipes with air from the outside; this chamber or these chambers are provided with a curvilinear pipe or pipes, or deflector or deflectors, which convey and deliver the air over the fuel, preferably in a downward and towards the door direction. In conjunction with the means or apparatus just described, I sometimes convey air into the furnace by openings at the sides of the door, and distribute it by perforated pipes or by small openings."—*Colliery Guardian.*

Petroleum in Italy.

At a recent meeting of the British Association, Professor Ansted submitted a paper on "Intermittent Discharges of Petroleum and large deposits of Bitumen in the valley of Pescara, Italy," which, according to the *Mechanic's Magazine*, was as follows: The valley of the Pescara runs up from the town of Pescara on the Adriatic coast to a narrow and important gorge of the Apennines. Close to the gorge, 35 miles from the sea, is the town of Tocco. The rocks near are limestones, overlying chalks. The limestones are much broken, but more or less nearly horizontal. The shales are below them, and nearly vertical. The limestones are cavernous, and bitumen exudes freely in summer from the exposed faces wherever there are cracks. Springs of water issues in abundance during part of the year. Height above sea, 2,750 feet. A couple of miles from the valley to the south there are water-courses, down which much water rushes after rain. There are many swallow holes into which water enters. From openings in the rock below, large bodies of water sometimes issue. From one of these, when rain has fallen, the water comes out mixed with much pe-

troleum, at a level of 1,000 feet. This has been collected, and is of some value. The quantity collected has amounted to 15,000 gallons in the course of some days in the month after the first rains (November). Of this perhaps 10,000 gallons would be petroleum, and the rest water—not salt. By drawing water into shallow holes above, at 1,480 feet, and 1,230 feet, the petroleum and water can be obtained artificially. Professor Ansted saw, when he visited the spot, about 1,500 gallons collected in two days; say 1,000 gallons of available petroleum, yielding valuable light and heavy oils, and asphalte on distillation. At Lette, about half way between Tocco and the coast, and in an area five miles radius round Letto are enormous deposits of bitumen and much sulphur. At Letto itself there is a vast gorge close to the town opening into a valley 300 feet below the gapway, 50 yards wide, and filled up with little else than earthy and some very pure varieties of black and brown bitumen. This gorge is nearly E. and W., and the vein or dyke of bitumen inclines to the N. The author traced it 800 yards up the gorge, and at least as far down towards the valley below. The whole of the way there was nothing but bitumen and limestone fragments formed into a broccia with bitumen. On the N. wall of the dyke was an enormous deposit of native sulphur in crystals. Half a mile S. of the principal dyke is another, where the author observed 20 feet of solid bitumen. Two miles away from the town to the N.E., he noticed another gorge, not so large as that at Letto, but yielding a large quantity of excellent bitumen. On careful distillation by Mr. Dugald Campbell, the bitumen yielded on an average 55 gallons of crude oil to the ton, of which, on redistillation, 17 gallons was light-burning oil, and rather more heavy than lubricating oils. Though well known and used, this spring does not seem to have been affected by the eruption. Except at Pyrimont, I have never seen water so charged with gas. A short distance beyond this spring is another of subacid water issuing from beneath old lava, at a temperature of 60 deg. Fah. About a mile from the mud volcano, and in the direction opposite the springs, are blocks of very tough basaltic lava, on a natural slope. They had apparently fallen from a basaltic cliff above. These blocks, when struck with a hammer, give out a strong bituminous odour, and when a fragment is broken off innumerable small cavities full of naptha may be observed on examining the broken surface. According to Professor Sylvestri, of Catania, the muddy water issuing at a temperature of 16 deg. centigrade was of the specific gravity 1·1469, and gave an alkaline reaction. The marly matter suspended in the water was 12·63 per cent. of the whole. When filtered, the specific gravity of the water was 1·503; taste, very salt and slightly bitter. It contained 6·84 per cent. of soluble salts, including bicarbonates, sulphates, phosphates, nitrates (trace), chlorides, bromides, iodines, and fluorides. The bases included sodium, potassium, cæsium, rubidium, calcium, magnesium, aluminum, lithium, and iron. As much as 6 per cent. consisted of chloride of sodium. The gas contained in the water was almost entirely carbonic acid gas, with a small quantity of oxygen and nitrogen.

What Shall We do for Coal?

Air—"Jolly Goode Ale and Olde."

With furnace fierce in the forge and mill,
And steamships on the foam,
And trains that sweep through vale and hill,
And roaring fires at home,
In warmth and wealth while we rejoice,
Nor heed the risk we run,
Geology, with warning voice,
Says, "Coal will soon be done:
Then forge and mill must all stand still,
And trains no longer roll,
Nor longer float the swift steamboat,
O! what shall we do for Coal?

"For countless ages forests dark
Grew thick o'er Britain's isle;
For countless ages wood and bark
Lay deep beneath her soil.
The old black diamond may appear
As though 'twould ne'er give o'er;
But seventy million tons a year
Will soon exhaust the store:
Then forge and mill must all stand still,
And trains no longer roll,
No longer float the swift steamboat,
O! what shall we do for Coal?

"Our goods by horse and cart must go,
By coach-and-four the mail;
Our travellers walk, swim, ride or row,
And steam give place to sail;
From wind and water we must try
To draw what help we can,
While sticks and straw our clothes must dry,
And boil the pot and pan;
And forge and mill must all stand still,
And trains no longer roll,
No longer float the swift steamboat,
O! what shall we do for Coal?"

If Britain's hopes on Coal depend,
Her race is well nigh run—
Decline and fall her realm attend,
As soon as coal is done;
Yet Britain flourished long before
Her treasures black were found;
And worth and valor, as of yore,
'Gainst wealth may hold their ground.
Though forge and mill should all stand still,
Cheer up, each valiant soul!
While Britain can breed British Man,
We never need care for Coal!—*Blackwood's Ma.*

Mining Summary.

Nevada.

The Comstock.—From the *Enterprise* of Sept. 13 we take the following: The suit long pending between the Kentuck and Crown Point companies has been settled for the sum of $20,000.....A contract has been let to sink the Ophir-Mexican shaft one hundred feet deeper. This is in order to get at a body of good ore found below the ninth level in the Ophir mine.....The rich streak of ore recently discovered in the Gould & Curry mine in sinking an incline from the third to the fourth Bonner shaft levels, is cut through and the incline is now running in porphyry. It will be run to the lower level for the purpose of causing a free circulation of fresh air, and when this is done the rich seam passed through will be thoroughly investigated and developed. From all appearances it will lead to something good.....During the month of August nine thousand three hundred tons of ore were taken from the Yellow Jacket mine, which yielded the nice little sum of $390,000., giving an average of a fraction less than forty-two dollars per ton. The affairs of this excellent mine are in a highly flourishing condition, and there is no apparent reason for the stock being at as low figures as it is.

Humboldt.—The *Register*, Sept. 15, says: Jno. C. Fall, Superintendent, dispatched by Wells, Fargo & Co., Thursday, to account of Pioneer Mill and Mining Co., in New York, 1610 ounces bullion, value $1500. .....Nason's smelting furnaces will be fired in the course of a week or two. Mr. Nason is now at San Francisco, procuring material to increase his facilities, and will soon be back and at work.....A correspondent writes from Star City, Sept. 12: Mining items scarce. Work continues in the Yankee and the American basin; and rumor has it that work is to be resumed in the De Soto mine. We have encouraging news from Santa Clara.

Hot Creek.—The Austin *Reveille*, of Sept. 21, learns from "Silicia Ringwood" the following facts relative to the Hot Creek district: The limestone is only a cap, and in a dozen water-worn ravines the true formation, consisting of talcose slate, granite, gneiss, and porphyry, is laid bare. From the numbers of ancient fossils found in the limestone, the formation is known to be a very old one, and geologically there is nothing to the prejudice of the district in relation to its silver mines. So much for a visionary bugbear. The mines open well. When a narrow seam of good ore is seen cropping through the limestone cap, the usual effect of a little blasting work is the exposure of a large body of fine ore. In the case of the Keystone, only a thin streak of good metal appeared on the surface, but now with a few days' work, a strong, well-defined vein of high grade ore is exposed. The Old Dominion showed a mere bunch of green stained quartz, and now it is nearly fifteen feet wide. The Silver Glance, Gazelle, and other well known locations, have, according to the amount of work performed, opened equally well. I have never seen a mining district where labor yields so remunerative results as it does in Hot Creek. Wherever a mineral-bearing vein has been worked upon it has invariably turned out well. How far down the rich and partially chloride ore found on the surface will continue, it is impossible even for a mining prophet to say, but already there is mineral enough near the surface to keep a dozen mills at work for several years. With mines such as those of Silver Bend, Hot Creek and Reveille districts, it will soon be a hard matter for us to prevent our speculating friends in San Francisco from rushing into the country and making incorporated "wild cat" out of every loose bowlder they find. If they will come, like good sensible fellows, and pay fair prices for genuine mines, we will give them accommodation; but we want no more "wild cats" in central Nevada, as they have already done us serious damage.

Cortez.—Two days ago a lot of crude bullion was brought into town from the Cortez district. It was obtained from the mines of the Mount Tenabo Silver Mining company, which is the present style of the original Cortez company. We are informed that the property of the company comprises fifteen locations, embracing some eighty or ninety thousand acres of mineral ground, besides vast tracts of timber and arable land. Mount Tenabo, one of the loftiest mountains in the State, which holds the principal and nearly all the silver veins in the district, is covered with a dense growth of timber. The property of the company is the most extensive and we believe the most valuable in the State. Of all this magnificent group of mines, only one is being worked at present, and that by a small number of workmen. It is reasonably believed that a more liberal policy could advantageously employ three hundred to five hundred men in the mines and suitable reduction works. The company owns a small thirteen stamp mill, with four furnaces and six Varney tubs, capable of reducing seven to eight tons of ore daily. The mill is situated in a canon about eight miles from the mines, over which distance the ore is both packed and hauled. The particular ledge from which the mineral was obtained that yielded the bullion is called the Cortez Giant, which is represented to be sixteen feet wide. A stratum of clay or conglomerate, three feet thick, lies next to both head and foot walls, bearing in the centre a vein of mineral ten feet in thickness. Near the centre of this vein is a stratum of very rich mineral, that is estimated will yield fully $250 per ton. The average quality of the vein is of a much lower grade, the assay of the pulp being $97. We saw this morning at the assay office of J. S. Currie four bars of silver, obtained from the crude bullion, which were of the following weight, fineness and value: No, 1. 943 ounces, 910 fine, $1,102 53; No. 2, 916 ounces, 916 fine, $1,084 61; No. 3, 903 ounces, 893 fine, $1,043 46; No. 4, 492 ounces, 824 fine, $524 87 We learn that the ore was worked up to thirteen per cent. of the pulp assay.—*Ib.*

Philadelphia.—Colonel Buel arrived in town this afternoon from the Philadelphia District, bringing in 4,150 ounces of crude bullion from his mill. The town of Belmont, where the mill is situated, is improving rapidly. At least thirty houses, of stone and adobes are being built or finished, giving to the place a substantial and lively appearance. Colonel Buel is driving work both on the High Bridge and Eldorado, and Isaac C. Battman and H. H. Allen are opening their small but valuable claim on the High Bridge.- *Ib.*

Kingston.—Mr. W. G. Blakely informs us that the new mill of the New England and Nevada Company, located at Kingston, will commence operations with ten stamps next week. The mill is supplied with four furnaces. The first work will be done for the Silver Mining Company, which will furnish ore from its Mother Ledge in the Santa Fe District, about five miles from the mill. Recent developments on this ledge have been very satisfactory, and show great improvement in the quality of the ore. According to the result of assays lately made, the ore contains a larger proportion of gold than silver.—*Ib.*

San Antonio.—On Saturday last, Mr. J. P. Courter left this city with a number of miners and a large supply of tools and provisions for the purpose of commencing work upon the mines of the Rigby Company at San Antonio. This company was incorporated in May last in New York under the management of A. J. Rigby, Esq., one of the pioneer miners of Nevada. The property of the company consists of the Rigby, Vulcan, Twilight, Aerolite, Los Animas, and other ledges. These will be fully developed during the fall and winter, and should they prove as good as the present indications promise, a large mill will be erected as soon as possible next spring.—*Ib.*

Austin.—The Diana mine is again yielding bullion, after a long interval of quiet. The ore is of a superior quality, as we saw to-day at the National Bank a bar of bullion valued at $1,000, obtained from five tons of the ore reduced at the Keystone mill. The mine is under the superintendence of General Wilde, and is said to be thoroughly worked.

Northumberland.—"M. D. F." writes to the *Reveille* that he recently met an acquaintance in Austin who had just struck a "big thing" in Northumberland District—had himself chipped from a monster vein a piece of rock that assayed $1,980 87 coin—and wanted him to visit it. Accordinly "M. D. F." started Sept. 1st, reached Northumberland District on the 2d. and after noting that the Lady Cummings is rich ($500 to $1,000 per ton); that the Richey and Hussey is good; the Detroit ledge No. 2 very promising; and several others worthy of mention—he says: "And now for that "big thing" which called me to Northumberland, and which produced the enormous assay of $1,980,87. My companion informed me that it was large and most eligibly situated; all of which I found to be true, and it was duly located and recorded under the name of Mountaineer. It is situated just about a half mile from the summit of the mountain upon the slope toward Mountain Valley, and about three-fourths of a mile north of the road to Philadelphia District. Within a mile and a quarter there is a beautiful little spring, the waters of which flow down a ravine for a distance of a hundred yards or more. This was duly located as the site for our future mill; and of wood for fuel there was no lack. So far, all was lovely, and our goose was hanging remarkably high. A number of pounds of the beautifully variegated ore—precisely, so my friend asserted, identical with that which yielded so hugely—was chipped from the monster lode and carefully packed in saddle bags for conveyance to Austin for more assays, in order to render assurance doubly sure ere we moved our ponderous machinery upon the spot. Arriving at Austin, an assay was had and the result was the inconsiderable sum of $31 56. The friend who took me to the place was astounded; but I confess that I was not. He insisted upon another assay. Accordingly, another establishment was tried, and a certificate now before me shows a yield in silver of $6 28 per ton. Intense indignation was now depicted upon the countenance of my friend as a gleam of light suddenly appeared to penetrate his noddle. He had been accompanied upon his previous trip to the ledge by a person to him a stranger. These two had taken from the vein several pieces of ore which had been rolled up in the latter's blankets, and when the former concluded to visit Austin for the purpose of having it tested, a piece was handed him by the other party, of a far different quality than that from the ledge; and hence the large result of nearly one dollar a pound. He mentioned the name of his de-

ceiver, who was at once recognized by all who knew him as a notorious liar and consummate bilk, who had thus "wrung in a cold deck" upon my unsophisticated friend for the purpose of cheating some purchaser, should he chance to find one."

Michigan.

From the Keweenaw *Times*, Sept. 29th, we learn that the Resolute (south) has a promising look; the Eagle Harbor is improving; but the Essex does not show quite as well as before. The Central looks well. .....The Houghton *Mining Gazette* of Sept. 27th, says of the Pewabic: The first level of this promising young mine, is now opened for over one thousand feet, and driving on the second level has been commenced on two points. As at all times heretofore, the lode shows splendid stamp work every foot of the distance opened, with a tendency to heavier copper in the bottom.....At the Adams, No. 1 shaft is down to the line of the first level to-day, and the drift north toward the spar transverse will be started away at once, and that vein will probably be cut across in ten days when we hope to obtain a more intimate knowledge of its prospective value. As soon as cut across, drifts each way will be started on it, and its contents thoroughly developed.....The new stamp building of the Sheldon Columbian is approaching completion quite rapidly, and in two or three weeks we expect to be able to report stamping being done.....Quite a number of parties are busily engaged just now in costining for the Calumet conglomerate. On section twenty-three the belt, as we announced last week, was found as rich as on the adjoining location. On sections six and seven explorations are making, but the lode has not been found, though it is thought the hanging wall has been cut in the trench on section six. At the Seneca a trench eight hundred feet in length did not discover it, though the course has been crossed even if it should vary several degrees from its supposed direction..... A correspondent of the Boston *Commercial Bulletin* writes: After leaving the Albany and Boston, and passing the two or three unimportant mines mentioned in our last chapter, we arrive at the Pontiac and Mesnard, which, though separate organizations, we may consider together, as being under the same management. Openings were commenced on these mines in the year 1859 and '60. The success on the Pewabic and Franklin vein naturally led to the supposition that the adjoining properties would prove as valuable, and work was begun on the vein in both localities. Ancient diggings of considerable extent were found, with many stone hammers, beds of charcoal and other evidences of former mining operations, considered wherever seen sure proof of the existence of copper. Explorations found the vein "in place," as it is called, with encouraging indications, and work was prosecuted vigorously. The conformation of the surface was not so favorable for mining as that of the neighboring locations, as the ground was low and required extensive drainage before much could be accomplished. Several shafts were sunk and levels driven, but the early results were not equal to the anticipations. Some rich stamp rock was taken out and some good barrel work, but no masses; and, though the vein had the same characteristics as in the Pewabic and Franklin mines, it did not seem to be so thoroughly impregnated with copper. After sinking one shaft to the depth of about two hundred feet, the character of the mine considerably improved, a fact which was concealed by the mining captain for an interested motive. He commenced cutting surface trenches in search of the epidote vein and suddenly abandoned this work also. Soon, however, it became whispered about that a great discovery had been made. The mining captain required first half the copper, and then $4,000 for disclosing his discovery. After wasting much time in fruitless efforts to come to an arrangement, he mass copper was found lying nearly upon the surface, only a short distance from the spot where the last explorations had ceased, and barely covered by a layer of soil and dead leaves. Upon the removal of these, the mass was found to be in a horizontal position, and if its surface measurement could have been taken as an indication of the copper it contained, its value would have been immense. Much speculation existed regarding its size, but when it was cleared and cut into pieces to carry away, it proved to be a thin mass, weighing about eighteen or twenty tons. The mass was not "in place" and explorations were made in search of the vein, in the course of which a smaller mass was found on the epidote vein; after much outlay, however, no other valuable results appeared, and a third attempt was made on the Albany and Boston conglomerate without any beneficial result. The mine is now closed, but the company retains its organization. The Pontiac produced some fine stamp work, but all labor on the mine is now suspended. The Franklin, Pewabic and Quincy mines are situated side by side. The Pewabic Mining Company was formed in New York in 1853. The first three years' labor proved almost entirely fruitless, and $22,000 were expended seemingly to no purpose. A shaft was then sunk at a little distance from the previous works, and the business office was removed to Boston. The mine, from its opening, proved to be very rich, but its character was different from those of the Keweenaw Point district, one peculiarity being the great width of the lode. Although some masses were found, and much good barrel-work was taken out, it was soon seen that the chief dependence would be upon its stamp work, the copper being thoroughly disseminated through the vein in small particles, rendering it emphatically a stamp mine. During the year 1855, it was worked on tribute, and 40,000 pounds of refined copper, from the mass and barrel-work alone, were taken out, of which the company received as their share something over 4,000 pounds. After that it was worked by the company, and the product of copper doubled each year until the year 1860. Six years after the first opening of the mine, its value being then permanently established, the directors put up a stamp mill costing over $100,000 and obtained that year copper to the value of $227,000. The mill has since been improved, and now stamps nearly 200 tons per day. It is connected with the mine by a tram road one mile in length with an incline operating so that the descent of the loaded wagons draws up the empty ones. The expense of opening and working the mine, with all the surface improvements, which alone have amounted to half a million of dollars, have been paid by the product of the mine, with the exception of $75,000, which was raised by assessments on the stockholders at the rate of $3 75 a share. In the year 1857, the property adjoining the Pewabic location, now known as the Franklin, was purchased principally by the stockholders of the Pewabic, and was opened and worked until within the past year, under the same management. Of the interior of the Franklin mine there is little to say, the characteristics of the vein being the same as in the neighboring location. There is a greater extent of vein on the surface than on the Pewabic, and it has consequently been worked farther in length, and not to so great a depth. The descent into it is accomplished by ladders. The mine seems to be abundantly supplied with every equipment for its proper working that will be necessary for many years to come..... The Marquette *Mining Journal* of Sept. 29th, supplies the following statements: The shipments of ore (in tons) from Marquette and Escanaba as reported by the companies' agents were—

	Week ending Sept. 21.	Previously reported.	Total.
Lake Superior Iron Co...			47,722
Jackson Iron Co.....	716	16,774	*17,490
Do. do			†36,763
P. & L. Angeline Iron Co.	973	20,097	21,070
Cleve'd Iron Mining Co..			*28,591
Do. do. do. ..			†12,937

*Shipped via Marquette. †Shipped via Escanaba.

The shipments of ore over the Bay de N. & M. Railroad to Sept. 22d, were:

	WEEK.	SEASON.
Jackson Iron Company.....	396	17,325 tons.
Cleveland "	1,228	23,509 "
Marquette "	286	6,416 "
Lake Superior "	4,004	49,852 "
Pitts & L. Angeline	1,846	20,972 "
Edwards (P. & L. A.)		2.149 "
Washington "	592	14,079 "
New England "		2,660 "
Parsons "		3,371 "
		140,333 "
Pig Metal, to Sept. 15th.....		11,148 "

Speaking of the exodus of coal, iron and tin mines from Cornwall and South Wales to the United States, the same paper says: "We feel confidence in the hope of having our several mines worked at an early day by accession to their current force, and a consequent increase of their yield, while the new ones, daily opening, will be conducted under more favorable conditions. Our own State awaits this class of citizens with peculiar longings, while every State has an interest in the same direction."

Montana.

The Virginia City *Post* of September 15th says: The residents of our Territory refer everybody who is desirous of knowing the extent of its resources, to the statistics and obvious facts. If Alder Gulch is "played out," we desire to state that there are claims in it which are producing $3,000 or more every week. Messrs. Campbell & Schinaman, of Diamond City, took with them to Fort Benton $200,000, in forty sacks of $5,000 each, the profits of one season in Confederate gulch. In the same train there were $200,000 more, which belonged to a few individuals. We have been informed by reliable parties that the steamboat Luella, which recently sailed down the Missouri river, conveyed over one million in gold dust, most of which belonged to miners alone. This extraordinary event has not been noticed as it should have been. If an ocean steamer should bring from Europe ten thousand dollars in coin, the incident would form the subject of a leader in every American journal. But when the wealth is taken from the bosom of the earth and poured into the national resources, it does not make an item for the press. Six workmen in McClellan gulch realized $70,000 apiece, and left for America about two months since. These instances of startling success might be multiplied; but, as they are of an exceptional character, we cite them to show that gold can be found in this region, and that it is not a "bilk" or a "humbug." We regret that there is no Mint to which we can apply for figures, and that policy compels many to conceal the amount of their treasures, and therefore we must present inferences instead of facts. The freight bills of our regular merchants, including transportation up the river and over the plains, will exceed $3,000,000. The value of the merchandise in the stores and fire-proofs is over $15,000,000. In addition to this property, millions have been expended in erecting buildings, buying stock, working claims, paying taxes, cultivating land, making ditches, grading roads, bridging streams and promoting the interests of the public. Who defrays these expenditures? The miners of Montana, who obtain their funds, not from the national banks, but from the pay-dirt of the gulches .... The news from Highland Gulch is very encouraging, and parties are starting for it day and night. Nearly 500 men are searching for its hidden riches, and many have been very successful. Bill Fairweather (of course it is needless to say that he discovered Alder gulch) was in town last Saturday, and claims that it is ten miles long, and equal in richness to his discovery. The bedrock appears to be composed of white sandstone, which resembles that of Australia. The dust is coarse, and many nuggets have been picked up, although none of them are of great value, the largest being worth $40. The diggings are shallow, and it is only five or eight feet from the surface to the bed-rock. The miners have not been disturbed by water. We have been told that a descendant of Ham, who owns desirable ground, has refused $5,000 for it. There is quite a stampede for this gulch, and its merits will be clearly known within a few days..... We take the following items from the Helena papers: The quartz mill of Wessels & Wilkes commenced operations at New York gulch on August 25th; that of Rumley & Watson will start at once.....Judge Turnley states that his mill, six miles above Helena, has lately made the best run ever made in Montana. The rock crushed is from the surface of the Park lode. No figures are given, and we cannot compare notes.....Twelve quartz leads, which promise well, have been discovered near the head of Flint Creek, in Deer Lodge county. They contain more silver than gold.....Four persons, who have prospected through the beautiful valley of the Judith and the Mussel-Shell river country, found gold, buffaloes and the "garden spot of Montana" .....Gaston & Simpson cleaned up one plate, four by five feet square, in their mill at New York gulch, on Sunday, and obtained between nine hundred and a thousand dollars from it.....Emigrant gulch is c lled a "big thing" and some are stampeding to it. .....Three quartz mills are in operation in the Hot Spring district .... A letter from Bannack, Sept. 6th, says: Half way up the divide, at the head of Lumber gulch, leading to Marysville, on either side are some of the finest leads in the Territory—the Mademoiselle, the True Flag, the Idaho, and others The famous Dacotah is in full view, and the miners on No. 6 are busily raising the rich quartz, and hauling it to the Butterfield mill, which keeps us its ceaseless stamping and puffing night and day. In Blue Wing district we came to the Huron, one of the best and oldest leads in the district, and, perhaps, the first quartz property sold in New York, after No. 6 Dacotah. The shaft is now 45 feet deep, of the dimensions of 5 by 9 feet, and the mineral looks well; indeed, some just taken from the bottom of the shaft is beyond all doubt exceedingly rich, and there is no longer a doubt in my own mind about the reality of the Huron being a permanent lead, and it will ultimately pay a handsome profit on all investments of the Huron silver mining Company of Montana. It appears that there will yet be quite a camp at the new diggings on Lemhi. Quite a number are mining there, and the dust that is brought into Bannock for goods is as fine as our own. We hear a rumor of rich diggings somewhere, more wonderful than McLellan or Alder gulches, said to be about seventy miles from Bannack.....Mr. D. W. Higgins discovered a valuable coal bed near the headwaters of the Big Hole river, in June, 1864. It is within a short distance of good wagon roads from Virginia City and other important points. There are several veins, from six to twenty-two inches in width, and all of them are included in a space which is five feet in width.....A correspondent writes from Bowlder Valley, Sept. 5th: Prof. Hedges is at work with about fourteen men, in the northwest corner of the valley, and intends to make extensive improvements, by the erection of a quartz mill. The prospecting on the upper Bowlder for quartz lodes is still alive, and the people of the whole valley labor under the pleasing impression that Bowlder valley will see the day when it will be ornamented with a thriving city, with a name famous for its rich and extensive quartz leads.....Correspondence from the Yellowstone river, August 6th, runs thus: Since my arrival, two hundred miners from Virginia City and Helena have been concentrating and organizing here to prospect the surrounding hills, the Snowy Range, Wind River and Big Horn mountains. Already there are discovered rich quartz leads not far from here, and it is calculated that a number of quartz mills would pay well if brought up in here next season.

Colorado.

We take the following from the Denver *News*, Sept. 26th: The JOURNAL OF MINING reprints an editorial from the *News* in relation to the Snake river silver region, and asks us for figures in relation to assays made from the ores of that country. In reply we have to state that last year the average of assays from four

hundred different lodes in the country named, was one hundred and twenty-two dollars in silver to the ton, the assays ranging from twenty to six thousand dollars per ton. This year, together with the last, will increase the assays to not less than one thousand lodes, and the average for the whole amount will be over one hundred and thirty dollars per ton, ranging all the way from twenty to twenty-eight thousand dollars per ton in the different lodes. We will give the accurate figures as soon as the mining season closes.... Some parties have just had a load of quartz crushed in a stamp mill at Black Hawk, yielding at the rate of over sixteen hundred dollars to the cord. The quartz is from the "Hattie Jane" lode, owned by Messrs. W. H. Morgan, Hoyt, Earle & Burdett, and is situated on the Arkansas River, just below Red Mountain, with wood and water very convenient, and a wagon road to the shaft from which the quartz was taken. This is the largest yield, by stamps, from any surface quartz ever treated in this Territory.... Charley Donnelly has discovered a valuable lode of argentiferous galena. He has sunk a shaft only some five or six feet, and has a completely defined crevice of five and a half feet solid ore. The lode, he calls the Bunker Hill. It is situated near Breckinridge, between French and Illinois gulches.... A correspondent writes from Boulder September 16th: I am glad to be able to report progress from Ward district. The Ni-Wot Co. have twenty-five stamps at work, on inferior quality, which give a weekly yield of $2,000 in gold. When some other improvements are made, now in progress, and their other twenty-five stamps are put to work, their weekly yield will be from $6,000 to $10,000 in gold. At a depth of forty feet on the Columbian lode, they have a crevice of twelve feet in width..... Another writes from Nevada City September 19th: The different mining companies are working well, and the general expectation of those best informed, appears to be cheerful and hopeful. The people here (in connection with the people of Denver,) entertain well founded and high hopes of an ultimate and not far distant success in the mining business—the great source of the future wealth of the Territory—which will advance all our interests gloriously..... The Central City *Register*, September 25th, says: The Messrs. Stowell, of Georgetown, made their first shipment of silver bullion yesterday, twenty-four pounds in weight. It is not a large amount, but a fine commencement. The Scotch hearth, under the management of Prof. Bowman, is doing finely, but they have no adequate means of separation. Their oxydizer does not work well, but carries off the silver with the litharge. The litharge when remelted and assayed, gave sixty-four dollars per ton. Some other means of separation must be employed..... Mr. Kip, Manager of the Kip & Buell company, is working on ores from the company's mine, which are paying a handsome profit. The mine is improving as he goes down.... Under the management of Geo. R. Mitchell, the Alps mine is doing well. He is taking out a fine amount of bullion and expects hereafter, to make large shipments of bullion..... The Dodge process continues running steadily, and with the most gratifying results. The establishment is under the immediate supervision of Fred. Hibbard. We hear good reports from the Keith process, also, but have no figures from either..... We were shown on Monday several very fine specimens of ores from a new discovery, the Malabar lode, situated in Peru district, Snake river. The ore is a fine grained dark colored galena, with streaks of sulphide of copper in it. The crevice is seven feet wide with five feet of ore, which, will undoubtedly assay largely in silver.

..... The public are warned, particularly in the east, against purchasing a lode known as the "Needham," now in the hands of Samuel Lathrop for sale, as the said Needham lode is nothing more than the Great Western, the discovery shaft on the Needham being No. one (1) west on the Great Western, and was worked and improved one year and a half ago by B. F. Hulburt & Co.... From the Surveyor General's report, says an exchange, we learn relative to this Territory that theoretically one third of the plains contain coal, and the discoveries actually made go to confirm the theory. Few veins yet have been opened and worked. Iron in some workable form exists all over the Territory. A small furnace is in operation on the boulder, near Boulder City, working "kidney ore," which is found in beds along the base of the mountains throughout the Territory, and yields from 30 to 65 per cent. of iron. Spathic ore is found in veins near Golden City, and yields 75 per cent. of iron. In the Territory are found alum, salt, gypsum, soda, lime, lead, copper, antimony, zinc, silver and gold. Salt is produced in the South Park in a small way, price twenty cents per pound. Petroleum wells on Oil Creek, near Canon City, produce two barrels per day. Oil springs exist along the base of the mountains. A Boston company have a well near Canon City which yields 24 barrels per day. A gypsum grinding mill runs on Bear Creek. The silver ore at the head waters of Clear Creek, 11,000 to 12,000 feet above sea level, assays, $400 to $2,000 per ton. Gold mining is pretty flat, having been almost at a standstill for some time, through speculation, high prices of labor, and Indian war. The produce for the whole Territory was as low as 1,500 ounces per week when the report was written. When mine and machinery are in running order, the stamp-mill process will mine and treat ores for thirty dollars per ton. Only 20 per cent. of the gold is saved by this system, so ores assaying less than $200 per ton cannot be worked to profit, thus reducing the paying lodes of the Territory to half a score..... Commissioner Wilson, of the General Land Office, has just received a communication from the Surveyor General of Colorado, in which he says he had just returned from the newly-discovered copper and lead mines, but had found the veins not sufficiently developed to enable him to judge accurately of their value. The copper occurs in the shape of boulders imbedded in feldspar. These boulders are pure carbonate of copper, of a fine quality. In some veins the copper is bedded in a soft decomposed gneiss, differing from the walls of the vein and easily worked with pick.

California.

Mariposa.—The *Alta*, of September 10th, again refers to extraordinary results from the "new process" as follows: Twenty tons of the quartz of the Pine Tree mine, Mariposa Estate, which class of rock usually yielded by the wet process from $8 to $12 per ton in gold, under the new system introduced gave a nett result of $683 16--equal to over 34 per ton. The present machinery of the new process is calculated to work eight tons every twenty-four hours, it being erected for experimental purposes. The results thus far have proven so successful that orders have already been given for new machinery intended to demonstrate, on a larger scale, the excellencies of the system, which is calculated to effect a revolution in quartz mining throughout the State. The attention of nearly all the large quartz mill owners has been directed towards the experimental operations on the Mariposa Estate, and the results so unparalleled have had their effect. It is probable that gold quartz mining will be thoroughly revolutionized. One feature of the process is that the tailings of wet crushing can be reworked with profit, and many mill owners are now adding the same to their machinery.

Nevada.—A letter from Meadow Lake, August 27th, says: The owners of the Pacific, Excelsior, Magdalene, Mohawk, Knickerbocker, Enterprise, U. S. Grant, and others, are with commendable zeal prosecuting work upon their lodes—sinking shafts, extracting quartz, and in other ways demonstrating their value with highly satisfactory results. As the result, several bars of bullion have already been produced, and to these will be added many others before the approach of winter. The Magdalene, located in August, last year, by Messrs. R. M. Howland and Dan. Dean, of Carson, has of late been attracting considerable attention. Assays from portions of this lode gave a product of five hundred dollars per ton. Surrounded by an abundance of timber and water, and advantageously situated for working purposes, it will prove a valuable mine, and the development thus far is realizing fully the expectations of its discoverers. Within a short distance, the Poughkeepsie, Tornado and New Jersey ledges are located. They show free gold to the naked eye. Many others of perhaps equal merit are only awaiting development to prove their value.

Plumas.—A correspondent writes from North Fork August 27th: Morris & Clarke have the best claim on the river, if not in the county. Their claim is paying one ounce per day to the hand..... The French company have been taking out large pay—as much as $3,000 per week—but it weakened on them a little the last week. The Jaw Bone company have taken out some good pay, obtaining as high as five dollars to the pan..... Lynn, Cook & Co. are on bed rock making wages..... Levatt & Davis struck big pay, running out $4 in one afternoon..... Benham, Wagner & Co. are taking out good pay in the old Vansickle claim.... Thompson, Reed & Co. are still piping in the Osborn ravine, and expect to make a big clean-up in a short time..... At Twelve-Mile Bar, York, Messner & Co. have in 400 feet of flume. They have just got their claim dry, and expect to do well. ..... On Ding Bat, Kiser & Co. are still piping..... On the Torrey Hill, Hallstead & Davis have stripped two or three acres of bed rock, but have not cleaned up yet ..... Rich Gulch has dried up for the season.

Kern.—The Havilah *Courier*, September 1st, says: Mr. Joseph Roberts of Long Tom district, superintendent of the Long Tom mine and mill, gives very flattering accounts of that section of our country..... Some fine specimens of rock from the Delphi mine, taken at the depth of one hundred feet, were left with us and prospected well. Some ore from the Washington lode, in the Rio Bravo district, discovered by John Poe, also showed a fine prospect..... The Cape Horn has been opened to the depth of forty-two feet, and shows a lode of three feet in thickness. It bids fair to prove the best mine of the "Bigler Purchase." The French Friend shows a ledge of two feet at the depth of forty ..... The new mill of the Rand company is completed, and is at work crushing the ore from the Relief and Fame lodes. The former has a ledge of four feet at the depth of two hundred feet. ..... The Jupiter company are energetically at work upon their mine.

Idaho.

The *Statesman* says, there is at the present time being shipped from Boise City, by stage, over a ton of gold and silver a week. It comes here by different stages from Alteras, Boise and Owyhee counties. We are not allowed to give figures, for reasons that seem good to some, but not to us. .... The Owyhee *Avalanche* says of the failure of More & Fogus: "On Thursday last, it became publicly known that this mining firm had disposed of its property and was insolvent. The extent of their liabilities we do not know, but must be very large—probably between two and three hundred thousand dollars.'..... The Indians continue to be troublesome, and the papers are calling upon the Government to furnish troops to protect Southern Idaho..... The *Avalanche*, speaking of a prospector who believes in witch hazel, says: He has wholly discarded the pick, shovel, sledge, drill, powder and fuse, and has substituted a forked stick. Whether the stick possesses any charmed or supernatural properties known to the operator only, we do not know; but if it don't then all we have to do when we want a mine is to get a forked stick, take a prong in each hand with the united end upwards, and take a stroll over the hills, and when a vein is crossed the upper end will turn down in spite of the most powerful efforts to the contrary. The "genius" under consideration says he was blindfolded and in this condition wandered over War Eagle, and in doing so crossed the Poorman, and the stick turned with such force that "four yoke of cattle could not have prevented its inversion." .... The *Avalanche* of Sept. 8th says of the celebrated Poorman mine: In company with Messrs. Peck and Baker, we took a cruise through this mine on Thursday. We have never been guilty of "puffing" any mine, and it would be entirely useless to do so in this instance, as but few men have ever seen anything near its equal in richness and therefore receive true statements of it with incredulity. Work is suspended except on the original Poorman ground, and at present the condition of it is about this: two shafts down respectively 104 and 114 feet—distance between, 128 feet. A tunnel extends from the bottom of one shaft to that of the other, and the workmen are stoping upwards from this tunnel, which has just been completed. The shafts follow the ledge downward, and the only difference perceivable in size or richness at any point exposed either in the tunnel or shafts is that to the north there is more gold. The ledge proper will average eighteen inches; in places pinching out to a few inches, but never altogether; nor does it ever lose its distinct character or solid wall rock. The wall rock is to the depth of several inches rich in gold and silver. This, added to the real ledge, makes an average pay vein of fully two feet. The ledge is soft, and blasting has never been required except in removing the wall rock in shafts and occasional points in the tunnel. The varieties and component parts of ore found in this mine are too complex and would require too much space for enumeration in this article. The most that men care for is the precious metals, and they are not wanting. Every part of the ledge, opened as before described, contains very large quantities of pure gold and silver—the latter predominating. The "candle-box" and "wagon-tire" reports did not emanate from our pen, but we are willing to vouch for their truth. We picked up one piece of silver the other day, among the second class ore, that would go far toward making a "buggy" tire, and saw solid chunks of silver as large as a gallon measure, and pure sulphurets of silver studded with free gold in much larger pieces. We could not find a piece of rock with any solidity that was not either full of free gold, or partitioned off with myriads of silver sheets, or made up of sulphurets of silver and free gold. It must not be inferred from these remarks that the whole ledge is of this character of ore—but we do mean to say that it contains tons of it, and that so far as human sagacity can foresee, will continue its present yield of pure metal. The decomposed quartz and vein matter is very rich in free gold, some of it yielding as high as forty dollars to the pan. Visitors to the Paris Exposition of 1867 will see sights of native metal that will substantiate all we have said, and New Yorkers will soon have the evidence in their city. We've made no attempt to more than generalize the nature and value of this mine.

Arizona.

The Arizona *Gazette*, of August 16th, says: At present, the copper mines of Arizona are attracting abroad more attention than the deposits of more precious metals. At Williams' Fork, on the Colorado river, many valuable copper leads are located, and a great deal of work has been done. The ore taken out here has been extremely rich, and large shipments have been, and continue to be, made to San Francisco; and now that the smelting furnaces recently erected are an assured success, we may look, also, for extensive shipments of ingots. Thousands of tons of ore, of a grade that would not warrant the expense of transportation, can be obtained on the surface and made into ingots on the ground. The want of fuel is a great drawback; but it is claimed that it will pay to ship coal from San Francisco for the purpose of smelting these low grade ores. The mines now being worked are within twelve miles of the river. Great progress has been made on several claims. A large number of men are employed, and the Fork has assumed quite a lively aspect. The Planet company have already shipped several hundred tons of rich ore,

and have some two hundred tons ready for shipment. Capt. Ashley, the Superintendent, is working five men only, and taking out about sixteen tons of ore per week, which averages from twenty to seventy-five per cent. At the Challenge they are working twenty men, and take out a great deal of ore, rich in gold and copper. Martin & Co. are working Mineral Hill and other mines. They have received and are putting up an engine and two smelting furnaces, and are going to work with a will. They have out a large quantity of ore, and keep about sixteen men at work, who take out some eight tons per day, assaying from twenty to sixty per cent. The Great Central company are working their Eliza mine, and have a fine prospect. Mr. Thompson, the Superintendent, has opened the mine well, and taken out quite a quantity of very rich ore. A smelting furnace has lately been put in operation, and is a success. About three hundred tons of smelting ore have been taken out, about half of which will, it is said, yield sixty per cent., the rest from fifteen to twenty. Considerable ore containing blue silicate of copper, hitherto disregarded, is now found to give forty per cent., and is among the best taken from the mine. The full development of this mine should not be delayed. Parties from New York are at work on the Carbonate. A great desideratum of these mines is quick transportation on the river. In the Harcuvar district, about forty miles from the Colorado, rich copper mines are found. All work is suspended for the present, but operations will be commenced extensively in the fall. The ore is of very fine quality, quite easy to smelt. It assays from twenty to forty per cent. There is plenty of wood and water on the ground and smelting furnaces are to be erected. On the Cunningham lode a shaft has been sunk some one hundred and twelve feet, and it is rich in copper all the way down. About two hundred tons of copper have been taken out, and are ready for smelting. Several other shafts have been sunk from twenty to thirty feet. Twelve miles nearer the river are situated other promising lodes. At the Comet, about twenty tons of good ore, paying forty per cent., have been taken out.

Minnesota.

A correspondent of the *Times* writes from Superior City, Wis.: It is now just a year since the gold fever of Vermilion Lake had its beginning. Since that time sixteen companies have been organized for the development of the region, and between one and two hundred persons have been upon the spot since last winter mostly occupied in proving claims. A number of assays have been made, none of them giving very satisfactory results. Indeed, Prof. Chase, of Rhode Island, advised in a printed report that those who were excited over Vermilion Lake should turn their attention to the cultivation of the soil. It is also true that almost every intelligent man who has pluck enough to visit the region returns with his ardor considerably dampened. And yet certain infatuated individuals persist in pushing the matter forward, and are constantly sending "specimens" to New York, Boston and Chicago. After hearing all sides of the question, we are satisfied that it is only a waste of money to work the talcose slate formations of Vermilion Lake. For our own part, we would quite as soon take stock in some of the enterprises for digging up the hidden treasure of Capt. Kidd. One company has expended $30,000, and has its stamping machine on the ground. It cost $1,500 to transport it from Superior City to the lake. As yet there is no road which can be travelled - only a trail through the swamps and forests. Most persons make the journey by canoe up the St. Lous and Embarras rivers. This route is over two hundred miles, and has some dozen or more portages. Altogether, the new "gold fields" have an unpromising look. The highest assay made by any person has been $28 to the ton, and Prof. Chase could make only $17.

Indiana.

The Terre Haute (Ind.) *Journal* of the 3d gives the following particulars of the discovery of oil in that city, already mentioned in our dispatches. A tremendous commotion was caused among the staid and quiet denizens of this city yesterday on the announcement that oil was flowing from Mr. Rose's artesian well in the rear of the Terre Haute House. We visited the well and found such in reality to be the fact. At 8 o'clock yesterday morning at the depth of 1,312 feet 9 inches oil commenced flowing from the orifice. At about noon tubing was inserted at a short distance down and immediately the oil was forced in a stream the full size of the cavity to a height of nearly 20 feet. A barrel of the fluid was saved and several barrels were wasted. There being no vessel to put the oil in the tubing was withdrawn for a time. When it was again put down the oil did not flow out. A small hand-pump was inserted, and during the afternoon three barrels were filled with oil. During the 24 hours previous to yesterday morning the drill went down 8 feet, passing through a soft blue sandstone. Those *au fait* in matters of oil pronounce the substance of the very best quality – a heavy, clear, lubricating oil, and worth about twenty dollars a barrel—about three times the value of that at Pit Hole. Such a well in the oil regions, with its present showing, would sell for $50,000. The boring of this well has cost about $12,000. It still belongs to Mr. Chauncey Rose. We understand there was a verbal agreement that in case soft water was found, the owners of the Terre Haute House were to take the well at its cost, and the lot in which it is located at its appraised value. Mr. Rose has been telegraphed, and operations will be suspended until it is learned what course he wishes to pursue.

Wisconsin.

A correspondent, writing to the *Times* from Superior City, Wisconsin, Sept. 10th, says: We spent two days last week in exploration of the new copper discoveries on Copper creek, thirteen miles from Superior City. The journey thither was the most difficult that we ever encountered. Two companies have been organized for the working of mines in this region—one known as the "Copper Creek Company," and the other as the "Wisconsin Company." The prospects of these companies are exceedingly good, the veins thus far exposed exhibiting very rich ore. Neither company has a stamping machine in operation, but another season will doubtless see the mines yielding a rich profit. Very little is heard of this mining region because of its inaccessibility, but a moderate expenditure upon roads will bring within reach a mining territory as promisingly as many of the well-known localities on Keewenaw point.....A valuable discovery has recently been made on the north shore of Lake Superior, about thirty-five miles northeast from Superior City. A very large silver vein has been uncovered directly upon the shore and near Encampment island. The vein juts out of the water's edge, and has been traced back a distance of two hundred feet. All who have seen the vein agree upon its obvious richness, and one man (E. W. Anderson, of Superior City,) was bright enough to secure the land at the earliest moment. Surely this is a country underlaid with riches, the extent of which is very little known as yet. What with the iron at Marquette, copper at Portage, silver at Encampment river, and possibly gold at Vermillion, it would seem that there is no limit to the mineral resources. If speculators would only have a little regard for actual values and not for mere printed certificates, mining operations would not be so much in disfavor, and the true wealth of the country would be sooner developed.

Utah.

The Salt Lake City *Vedette* of Sept. 6th, says of the Creek *placere* diggings: Most of those who have been up say that there is gold there, but it will not be known whether it exists in paying quantities or not until some one digs down twenty or thirty feet to the bed-rock. Up to the present time no one has gone down more than six or eight feet, and some experienced miners claim that there is not a particle of gold there—that the color found is produced by a peculiar quality of sand. But even if these mines turn out to be a humbug, it has drawn the attention of our citizens to the subject of Placer Mines, and unless scientific men are very much at fault *there are* rich mines of this description in the immediate vicinity of Salt Lake City, and we believe that whoever thoroughly prospect this country will be well repaid for their trouble, and undoubtedly the City Creek excitement will give a stimulus in this direction, even should those mines fail to justify present expectations.....In another article, the same paper says: Last night's reports from the City Creek mines were favorable. Mr. Molitor, of the firm of Bohm & Molitor, assayers, was up, and he denies, in the most positive manner, the report that the supposed gold is colored sand. He says further, that the prospects are highly favorable, but it is fifty or sixty feet down to the bed-rock.

Louisiana.

A mining company in Northern Louisiana recently struck a solid block of pure lead, weighing thirty-three tons. Other large blocks were found at a distance of eleven feet below the surface of the ground. The mine is worked by private individuals.

St. Domingo.

A letter to the N. Y. *Tribune*, dated "The Copper Mountain, Aug. 18th," narrates a trip of the writer to the new copper mines of the Dominican Republic, which are now being extensively worked by American capital. He thus sums up: I am now in the very heart of the mining region, but I will not attempt details to-day. I will state in brief that citizens of New York have seven clusters of copper veins, each set forming a distinct and legally recorded mine, and each represented by a distinct investment of Northern capital. All are regularly outlining their work, and all this is the swift outgrowth of one little message from President Johnson. I have nothing to do with the man or his party, but American interests and historic truth demand the public assertion of the fact. President Johnson's Message to Congress recognizing the Dominican Republic was but a tardy act of justice, for which I should not have died of gratitude had I been President here; but this measure of friendliness was instantly responded to here by greeting liberal mining concessions to all the American applicants then before the Dominican Government, and liberal laws were enacted to enlarge and secure the interests of American enterprise in general. A gentleman whose long official acquaintance here had qualified him for the duty, was invited to assume the charge of making these several grantees understand the breadth and liberality of the Dominican policy, and already $50,000 of southern gold is opening the way for the profitable investment of millions. . . Other correspondence from St. Domingo city, Sept. 9th, runs thus: . . . We are in the midst of a regular California excitement. Nothing is talked of but copper. We have copper in the street and in the store, in the office and in the workshop—copper at church—copper for breakfast, dinner and supper—and "beneath the evening star, in the pauses of the gay Eolus," the staple topic of conversation is still copper. The recent extraordinary discoveries by Americans of copper ledges in the Nigua mountains have startled this ancient and fish-like community into new life. It appears that these copper mines are rich beyond anything previously known, far surpassing in prospective yield the world-famous copper mines of Cuba. The officers of the United States steamer Mackinaw, who visited the copper region in the middle of last month, came back bewildered. They have sent a flaming report of their observations to the Navy Department at Washington, which has no doubt ere this astonished the spectacles of Father Gideon. I understand that five distinct set of mines have already been denounced and opened by a New York company, and the ore is already coming down by the cart load. One mine, a few miles to the eastward of where the Americans are at work, has been sold to an English company for £16,000 sterling, and a party of English miners is expected soon to commence work. Yank must pick up his legs and not let his English cousin get ahead of him. John knows a good thing when he sees it, and when he gets wide awake, he does business on a big scale. For the satisfaction of those statistical fellows among your readers who believe nothing unless it comes in the shape of a scientific report, I am permitted to make the following extracts from an official letter to a department of the government:—

The already known copper fields extend some twenty miles from east to west, and ten to twelve across to their northern margin. These new features and another class of minerals, among which gold is found in various forms and combinations, supersede the especial sway of copper.

I hesitate to repeat what I have personally seen and positively known of the ore veins permeating these hills in almost every direction. The statements might seem exaggerated even to those familiar with the ray bed of our Lake Superior or California copper mines. I will, therefore, simply quote a few facts from a late scientific report, dated July 30, 1866, of Engineer Keroschkel.

He there states, with exact truth, that these mountains are threaded by rich veins of copper in such singular abundance that they can only be compared to the network of an immense spider web. These veins generally run north from ten to twenty degrees west, but in some cases they range within a few degrees of east and west, most frequently deviating in a descending line seventy to eighty degrees from the horizon. The copper is found in them in the following combinations:

First.—Copper appears in carbonates malachite, lapis lazuli. This combination shows as high as seventy-five per cent. of metallic copper.

Second.—Oxydes, mixed with iron, cobalt of antimony, showing fifty-five per cent of metallic copper.

Third.—Copper pyrites, in various combinations, yielding from twenty-five to thirty-five per cent. of metallic copper.

Fourth.—Copper and nickel, in various combinations, showing an average of thirty per cent. of copper and four per cent of nickel.

These mineral combinations are found in surrounding rocks of slate, diabar, and quartz, which casing contains from ten up to thirty, forty, and even fifty per cent. of copper. The presence of nickel and silver in all these combinations is ample to pay the whole expense of mining the ores. * * * An epoch of enterprise has been inaugurated here which promises grand results. Within a twelvemonth I confidently expect to see ten thousand unterrified Americans browsing round down here, and a hundred mining companies in successful operation.

British Columbia.

At Grouse Creek, the Heron company, after running a tunnel 80 feet and losing bed rock, commenced sinking a shaft: on getting down a few feet they struck dirt that prospected from $2 to $10 to the pan; these prospects continued until bed rock was reached on Saturday last; the depth of the pay gravel is about 10 feet; the company washed up the dirt that was taken out of this hole and had 47 ounces. Short Bend company wash up on an average 18 ounces every two days. Ne'er-do-Well company have been annoyed lately in having to blast a high spur of bed rock, but have now got through and on Friday got a prospect of $40 to the pan. Shy-Robbin company on the west side of the creek, are just starting a tunnel; on Thursday they washed up a little of the dirt on the rim rock and had about seven ounces of heavy gold, some of the pieces would weigh $6 or $7. The gold is of a paler color than that found on the other side of the creek .....The Victoria *Chronicle* July 30th says: The latest news from this locality was received last night. It is reported that a man known as "Black Hawk" has struck a rich prospect in the bank on French Creek. The claim had been abandoned by its former owners. He took out seventeen ounces in one day. Mons. B. Deffis has been badly injured in his claim on French Creek by some timber falling on him. 75 ounces of dust has been received at Yale.....On McCullough creek the Discovery and the next claim below were the only claims that had taken out any gold at the lower end. They were tunnelling up their claims,

and when we left were blasting through rocks. Higher up, on the flats, several claims were washing from $7 to $10 a day to the hand. The diggins here are shallow and soon worked out.....The Walla Walla *Statesman*, Aug. 10th, says: Our old and esteemed friend, I. Kaufman, Esq., formerly of the Dalles, arrived at Walla Walla on Monday last, directly from the Big Bend country. Mr. K. brought with him some $60,000 in treasure, mostly taken from the Big Bend mines. In the lot was a specimen which in size and appearance bore a marked resemblance to a lamp reflector. The back of the specimen was of rough quartz, while the face shone with the splendor of burnished gold. It weighed $253, but Mr. K. said $500 would not buy it. The water had subsided, and the miners were getting fairly to work. The mines are what is known as "deep diggings." In some instances the miners had to go down fifty and sixty feet before reaching the pay dirt. Those who have got to work in their claims are taking out large sums and are well satisfied with the prospect.

GOLD.

COMPANY.	SHARES.	STOCK.	SITUATION OF MINE.	SECRETARY & PLACE OF BUSINESS.
Acadia			Nova Scotia	H. W. Nelson, 24 City Ex., Boston
Ada Elmore	200,000	$2,000,000	South Boise, Idaho	S. Lawrence, 157 B'way, N. Y.
Amber	300,000	300,000	Greene Co., Pean	Geo. W. Grove, 276 S. Third, Phil
Albion		300,000	Halifax, Nova Scotia	H. W. Nelson, 24 City Ex., Boston
Alps	100,000	250,000	Illinois Central Dist., Col.	I. Stanton, Jr., 25 Nassau, N. Y.
Ascot	50,000	5,000,000	Sherbrooke, Canada E.	G. H. Morrison, 17 Nassau, N. Y.
Atlantic				Chas. Barett, 13 Doane, Boston.
Atlatic & Pacific	50,000	5,000,000	Humboldt T., Humbolnt co.	J. N. Sewall, 8 Broad, N. Y.
American	100,000	5,000,000	Gregory Dist.	
American Flag	60,000	600,000	Nevada Dist., Col.	H. Foles, 71 B'way, N. Y.
Astor	200,000	1,000,000	On Comstock Lode	J. Chapman, 71 Broadway, N. Y.
Baltic			Colorado	New York.
Bates & Baxter			Colorado	New York.
Bay State	200,000		Colorado	Lem'l Bangs, Boston.
Benton	100,000	500,000	Colorado	F. W. Capen, 44 Ex. Pl., N. Y.
Black Hawk	50,000	5,000,000	Gilpin co., Col.	D. Littlejohn, 81 John, N. Y.
Beacon		500,000	Halifax co., Nova Scotia	J. B. Post, 20 Ex. Pl., N. Y.
Bobtail	100,000	1,000,000		J. Stanton, Jr., 25 Nassau, N. Y.
Briggs	10,000	1,000,000	Gilpin co., Col.	D. Littlejohn, 81 John, N. Y.
Bradshaw	250,000	1,000,000	Yavapai County, Arizona	O. H. Conover, 219 Dock st., Phil.
Burroughs	100,000	1,000,000		L. Bangs, 22 Pine, N. Y.
Bullion	200,000	1,000,000	Bannock, Montana	69 Liberty, N. Y.
Bullion Consoli.	300,000	300,000	Summit and Clear Creek, Col.	J. P. Whitney, 19 Lindall, Boston
Calvin	200,000	1,000,000	Clear Creek co., Col.	
Canadian				A. Call, 7 Phœnix B'l'g, Boston.
Chem. Gold&S. R				64 B'way
Ch. Un. Gold Co.	240,000	1,200,000		Jesse G. Pitts, 69 Liberty
Chebucto	100,000	500,000	12 miles from Halifax	J. E. M. Gilley, Boston.
Clarendon		500,000	5 miles from Halifax	H. Doane, 41 State, Boston
Chase	5,000	500,000	Colorado	W. E. Lawton, 81 John, N. Y.
Central Gold M.	20,000	1,000,000	Central City, Col.	L. Bangs, 17 Nassau, N. Y.
Central Mining	200,000	1,000,000	Colorado	46 Exchange Pl., N. Y.
Chandiere	100,000	500,000	5,000 A Famine Riv. C. E.	Wm. B. Fowle, Boston.
Cobden	100,000	1,000,000	Idaho	New York.
Colonial				W. N. Ely, 7 Trav'r B'l'g, Boston
Colorado Boston			Colorado	R. C. M'Laughlin, 60 State, Bos'n.
Colorado N. Y.			Colorado	12 Pine, N. Y.
Coleman			Colorado	New York.
Columbia	30,000	3,000,000	Austin City, Nevada	10 Pine, N. Y.
Consuelo Gold				54 William.
Consol Gregory	50,000	5,000,000	Gregory Dist., Col.	30 Pine, N. Y.
Cook & Kimball	1,000	150,000	Colorado	W. W. Baldwin, 35 Wm., N. Y.
Copalhnshee	250,000	5,000,000	Parke co., Col.	J. C. Stocker, 137 B'way, N. Y.
Corrisanuee	100,000	1,000,000	Colorado	New York.
Commonwealth			Nevada	Philadelphia.
Corrydonn	100,000	2,500,000	Gilpin co., Col.	46 Exchange Pl., N. Y.
Continental	20,000	2,000,000	Gregory Dist., Col	115 Liberty, N. Y.
Central Gold	200,000	1,000,000		L. Bangs, 22 Pine, N. Y.
Dauphin & Colo.	200,000	1,000,000	Colorado	John S. McMullin, 423 Walnut, Pa.
Day & Bushnell	300,000	3,000,000	Colorado	T. Chalmers, Jr., 20 Ex. Pl., N. Y.
De Lery,		10,000,000	Chandiere Valley, Canada E.	J. M. Winchell, 72 Cedar, N. Y.
Denver	50,000	1,000,000	Gilpin & Clear Creek, Col.	J. Wadsworth, 61 Cedar, N. Y.
Devonshire				W. Stockbridge, 74 Fr'klin, Bos'n.
Downieville	300,000	300,000	Colorado	J. C. Harriott, 70 Wall, N. Y.
Dorset			Chandiere River, C. E.	F. McJimsey, 59 Wm., N. Y.
Eagle	100,000	1,000,000	Gold Dirt Dist., Col	J. P. Davies, 81 John, N. Y.
East Bannack	100,000	200,000	Bannack City, Montana	J. Callender, 48 Ex. Pl., N. Y.
Eldorado	500,000	2,500,000	San A Dist., 9 miles of Austin	208 S. Fourth, Phila.
Empire Mill & M				O. F. Griffin, San Francisco.
Enriquetta			Arizona	New York.
Esperanza		500,000	Star D., Humboldt co.	117 Broadway, N. Y.
Etna	50,000	500,000	Nevada Dist., Col.	C. W. Bryant, Boston.
Excelsior	30,000	300,000	Central City, Col.	J. Weatherbee, Jr., 11 P. B'g, Bos.
Fairmount	20,000	200,000	Colorado	John P. Harker, 109 N. 6th, Phil.
Famine Falls	100,000	1,000,000		D. L. Dodge, 80 B'way, N. Y.
Garrisons	100,000	5,000,000	Colorado	C. G. Mease, 29 William, N. Y.
Gem	25,000	1,250,000		H. K. Gates, 191 B'way, N. Y.
Georgetown			Colorado	New York.
Gilbert River				C. E. Jackson, 18 Phe'x B'g. Bos'n.
Gilpin				C. W. Galloupe, 76 State, Boston.
Golconda	250,000	5,000,000	Sherbrooke, Canada E	W. H. Adams, 19 Broad, N.Y.
Gold Field				C. B. Cowling, 39 Kilby, Boston.
Gold Rock	5,000	500,000	Central City, Colorado	R. M. Lockwood, 113 Wall, N. Y.
Gold Hill	50,000	500,000	Colorado	W. T. Eustis, Boston.
Gold Mountain	600,000	6,000,000	Clear Creek Co., Colorado	25 Nassau, New York.
Gold Min'g of Co	50,000	5,000,000	Colorado	E. Latham, 23 William, N. Y.
Golden Gate	60,000	600,000	Sum. High'd&Mill C. D., Mon	J. Morse, Jr., 117 B'way, N. Y.
Gunnel Central			Colorado	70 Broadway, N. Y.
Gunnel Gold	300,000	3,000,000	Colorado	F. E. Roelfson, 78 & 80 B'way, N.Y.
Gregory	20,000	1,000,000	Colorado	Thos. Wildes, 17 William, N. Y.
Granada	50,000	125,000	Colorado	J. Stanton, Jr., 25 Nassau, N. Y.
Great Western	60,000	600,000	Russel Dist., Col.	E. Kemeys, 70 Broadway, N. Y.
Gunnel Gold	100,000	1,000,000	Colorado	F. E. Roelofson, 78 B'way, N. Y.
Halifax				A Case, 7 Phœnix B'l'g, Boston.
Harmony				Demas Barnes, 21 Park Row.
Hemit'ge Ranch	30,000	300,000	El Dorado, Cal.	
Home	80,000	2,000,000	G'ld Dirt Lode, Gilp. co., Col.	J. P. Davies, 81 John, N. Y.
Holman	150,000	300,000	Gilpin co., Col.	J. O'Neill, 24 Nassau, N. Y.
Humboldt	100,000	500,000	Colorado	78 B'way,
Idaho Gold	100,000		Montana	5 Pine, N. Y.
Isaac's Harbor	100,000	500,000	Isaac's Harbor, Nova Scotia	W. F. Shirley, 137 B'way, N. Y.
Isle Royale				44 Ex. Pl.
Kansas Colorado	100,000	1,000,000	Colorado	J. G. Greenlies, 111 B'way, N. Y.
Kent				G. H. Wyman, 19 Phe'x B'l'g, Bos.
Kip & Bucil	100,000	200,000	Colorado	J. C. Harriott, 70 Wall, N. Y.
Knickerbocker	100,000	1,000,000	Colorado	F. Avery, 78 B'way, N. Y.
La Crosse	100,000	$1,000,000	Nevada Dist., Colorado	H. Fales, 71 B'way, N. Y.
Liebig	200,000	$1,000,000	Colorado	
Lake Major	12,000	600,000	Nova Scotia	Fred. Franck, 113 Water, N. Y.
Mariposa Gold	100,000	10,000,000	Bear Valley, Cal.	G. W. Farlee, 34 Wall, N. Y.
Mammoth	50,000	500,000	Colorado	J. Jarrett, 41 Liberty, N. Y.
Manhattan	100,000	000,000	Colorado	W. R. Lothrop, 172 B'way, N. Y.
Massachusetts	250,000	200,000	Gilpin co., Col.	W. D. Briggs, 11 Phe'x B'l'g, Bos.
Merchants	30,000	600,000	Alturas co., Idaho	Jas. K. Selleck, 157 B'way, N. Y.
Metropolitan				
Mountain Pride	100,000	1,000,000	Bl'r C'k, St. Rse., Idaho	29 Pine, N. Y.
Montague	50,000	500,000	near Halifax, Nova Scotia	C. B. Cowling, 39 Kilby, Boston.
Mount Alpine			Griffith Dist., Clear C'k, Col.	J. B. Randol, N. Y.
Mount Vernon	500,000	5,000,000	Mt. V. & Mam'th Dist., Nev.	25 Park Row, N. Y.
Mount Vista	50,000	500,000		J. Chapman, 23 Nassau, N. Y.
Montana	100,000	400,000	Nevada, Ills., Greg'y, Col.	A. L. Guerber, 54 Wm, N. Y.
Monte Christo	100,000	2,000,000	White Pine District, Nev.	Thos. Dunlap, 413 Chestnut, Phil.
Montezuma	100,000	500,000	Colorado	F. B. Webster, Boston.
Montrose	100,000	1,000,000	Clear Creek co., Col.	C. A. W. Sibley, 80 B'way, N. Y.
Morning Star	5,000	5,000,000	Owyhee co., Idaho	E. M. Barnum, 137 B'way, N. Y.
Mexican Pacific	100,000	10,000,000	Mexico	J. Mackie, 88 Wall, N. Y.
Melones & Stan			Calaveras co	606 Mont, San Francisco.
National	300,000	3,000,000	on So. Boulder C'k, Col.	31 School, Boston.
Nevada Star				25 Pine, N. Y.
New England	50,000	150,000	Black Hawk, Col.	J. Weatherbee, Jr., Boston.
New Mexico			near SantaFe	
New Gregory				W. A. Kent, 144 State, Boston
New York City	50,000	5,000,000	G'd Canon P't, Land. co. Nev	10 Pine, N. Y.
New York Dist.	50,000	500,000	Austin, N. Y. Dist., Nevada	71 B'way, N. Y.
New York of Col	00,000	1,000,000	Colorado	F. E. Roelfson, 74 B'way, N. Y
N. Y. & Nevada	100,000	1,000,000	Nevada	J. J. Osborn, 30 Pine, N. Y.
N. Y. G Min'g	100,000	1,000,000	Colorado	F. E. Roelofson, 78 & 80 B'way.
N. Y. & Eldor'do	250,000	2,500,000	Nevada	G. H. Munroe, 106 B'way, N. Y.
N. Y. & Idaho			Idaho	180 Chatham, N. Y.
N. Y. & Santa Fe			Nevada	New York.
N.Y. & Owyhee		1,000,000	Owyhee co., Idaho	6 Pine, N. Y.
N. Y. & Oro Fino	10,000	1,000,000	Owyhee co., Idaho	137 Broadway, N. Y.
N. Y. & Reese R			Nevada	New York.
N. Y. & Renfew				2 Murray, N. Y.
N. Y. & Washoe			Nevada	New York
North Clear C'k	100,000	1,000,000	Gilpin co., Col.	J. Francis, 80 B'way, N. Y.
Nova Scotia				Chas. Barrett, 13 Doane, Boston
N. Y. & Nova Sc	100,000	1,000,000	Tangier, Nova Scotia	Jos. E. Gay, 3 Hanover, N. Y.
National S Min'g		1,500,000	Owyhee co., Idaho	115 B'way, N. Y.
Occidental	5,000	500,000	Nevada & Ills. C. Dist., Col.	100 B'way, N. Y.
Oldham				Chas. Barrett, 13 Doane, Boston.
Ophir	62,500	625,000	on Comstock Lode, Nevada	Moses A. Hopock, 45 William.
Pacific	40,000	4,000,000		24 Pine, N. Y.
People's	100,000	5,000,000	Alpine & Sierra cos.	23 Nassau.
Peck				E. R. Sawyer, 144 State, Boston.
Perigo	60,000	3,000,000	Ind. Dist., Gilpin co., Col.	J. W. Stratton, 90 B'way, N. Y.
Pine Mountain	30,000	3,000,000	Pine Mountain Dist., Nev.	F. K. McCully, 157 B'way, N. Y.
Pioneer & Inskip			Buena Vista Dist., Nevada	15 Nassau, N. Y.
Phila. & Color'do	20,000	1,000,000	Central City, Col.	E. W. Clark & Co., Phila.
Phelps & Gilm're	200,000	1,000,000	Colorado	W. H. Steudevant, 25 Nassau.
Pleasant Valley	125,000	1,250,000	Colorado	J. S. Lyon, 69 Wall, N. Y.
Pontiac	50,000	1,000,000	Ill. Cen. Dist., Col.	R. H. Rickard, 19 Nassau.
Prescott	100,000	1,000,000	Central Arizona	69 B'way, N. Y.
Quaker City			Ind't D't, G'd D't City, Col.	103 South Third, Phila.
Quartz Hill	40,000	100,000	Nevada Dist., Col.	J. A. Tyler, 29 Wall, N. Y.
Rancho C'k	10,200	1,200,000	Pine Wood Dist., Nevada	18 Broad, N.Y.
Realito		1,600,000	G'd Hill D., Storey co., Nev.	117 B'way, N. Y.
Reese River P'f'l	100,000	1,000,000	AmadorDist., Landor Co., Nev	Elijah Alliger, 67 Wall, N. Y.
Renfrew				W. Stockbridge, 74 F'klin, Bos'n.
Republic	15,000	1,500,000	Amador D., Lander co., Nev.	67 Exchange Pl., N. Y.
Rocky Mountain	50,000	500,000	Grey & Empire Dists., Col.	E. L. Bolles, 70 B'way, N. Y.
Reciprocity	100,000	1,000,000	Canada East	B. B. Grant, Jr., 71 B'way, N. Y
Scorpion			Virginia City, Nevada	617 Clay, San Francisco.
Sherbrooke	100,000	1,000,000	Sherbrooke, Canada East	F. Schumacker, Cliff, N. Y
Silas Wright	60,000	600,000	Amador D., Lander co., Nev.	18 Wall, N. Y.
Silver State	100,000	500,000	Humb't Starr. Pr. R. D Humb't co., Nevada	R. S. Miller, 49 William, N. Y
Silver Wave	300,000	3,000,000	Resee riv, Lander co., Nev.	Emmet Blair, 243 B'way, N. Y
Smith & P'rmlee	125,000	2,500,000	Colorado	G. A. Lathrop, 4 Broad, N. Y.
Smithfield	100,000	400,000	Gilpin Co., Col.	A. F. Baum 48 Broad st., N. Y.
Spanish		3,000,000	La Plata, Churchill co., Nev.	228 South Third, Phila.
So. Clear C'k			Colorado	Canastota, N. Y.
Starlight Ledge	50,000	500,000	P'ville, El Dorado co.	
Star of Color	200,000	2,000,000	Colorado	J. N. Powers, 22 Pine, N. Y.
Standard	50,000	500,000	Gregory Dist., Col.	T. A. Mitchell, 70 B'way, N. Y
Steptoe	20,000	2,000,000	G'd Can., Lander co., Nev.	10 Pine, N. Y.
Sterling City		1,200,000	Colorado	New York.
Stewart	100,000	500,000	Colorado	C. Durham, 31 Exchange, Boston
Suffolk				Carlos Cobb, 22 William, N. Y.
Southard				Wm. Wallace, 11 Doane, Boston.
Stafford				C. E. Jackson, 15 Central, Boston
Tascher	100,000	1,000,000	Colorado	F. J. Wright, 8 Wall, N. Y.
Texas	50,000	500,000	Black Hawk City, Colorado.	Wm. E. Parish, 155 B'way, N. Y
Triunfo			San Antonio, L. Cal.	San Francisco.
Union	240,000	12,000,000	Colorado	F. A. Potts, 110 B'way.
United States	75,000	1,500,000	Colorado	J. P. Stevens, N. Y.
University				31 Nassau, N. Y.
Virginia City	250,000	250,000	Nevada	J. B. William, 78 & 80 B'way.
Wauba Yuma	600,000	6,000,000	Arizona	35 William, N. Y.
Waddingham	48,000	1,200,000	Alturas co., Idaho	Jas. K. Selleck, 157 B'way, N.
Waverley				J. Leighton, 97 State, Boston
Windsor Gold M	10,000	100,000	Colorado	25 William, N. Y
Wilson & Cass			Colorado	New York

LEAD.

COMPANY.	SHARES.	STOCK.	SITUATION OF MINE.	SECRETARY & PLACE OF BUSINESS.
Amenia	100,000	$ 500,000	Duchess co., N. Y.	G. Furman, 77 Cedar, N. Y.
Bucks County	10,000	200,000	Bucks co., Pa.	R. R. Sinclair, 53 Ex. Pl., N. Y.
Canada	40,000	250,000	Canada	Alb. Case, 7 Phe'x B'l'g, Boston.
Clute	150,000	550,000	Macomb T. St. Law. co., N. Y.	Bev'l'y S. Merrill, 42 Cedar, N.Y.
Continental	200,000	500,000	Martinsburg, N. Y.	J. Sickles, 57 Ex. Pl., N. Y.
Eastport	100,000	1,000,000	Eastport, Me.	R. Vose, 54 William, N. Y.
Erie	40,000	4,000,000	Orange co., N. Y.	Ogden Gaul, 25 Pine, N. Y.
Hampton	100,000	500,000	Hampshire co., Mass.	C. W. Bryant, Boston.
Jefferson				65 Wall, N. Y.
King's Hill	0,000	50,000		W. L. Haskin, 180 B'way, N. Y.
Lake Superior	200,000	1,000,000	Secs. 5 & 36 T., 49 & 50 R., 28 & 29 Marquette co, Mich.	C. L. Mather, N. Y.
Lancaster	50,000	250,000	Lancaster co., Pa.	J. R. Sibley, 35 Pine, N. Y.
Macomb	10,000	550,000	Macomb T. St. Law. co., N. Y.	C. E. Scofield, 42 Cedar, N. Y
Maine	50,000	500,000	Eastport, Me.	A. L. Butler, 54 William, N. Y.
Mineral Point	100,000	500,000	St. Lawrence co., N. Y.	H. W. Warren, 60 City Ex., B'stn.
Morgan	100,000	500,000		W. Williams, 42 Cedar, N. Y,
Manhan				40 B'way, N. Y
Mount Hope	80,000	200,000	Mt. Hope, Orange co. N. Y.	W. Williams, 24 Pine, N. Y.
New Hampshire	100,000	500,000	New Hampshire	W. A. Farrar, 71 B'way, N. Y.
N. Y. & Boston		1,000,000	Chester co., Pa.	S. M. Cockein, 22 William, N. Y
Oswegatchie				24 Pine, N. Y.
Owens Lake	50,000	250,000		C. W. Bond, 78 Cedar, N. Y.
Phœnix	50,000	250,000	Columbia Co., N. Y.	G. W. Butler, 54 William, N. Y.
Placentia Bay	200,000	1,000,000	Newfoundland	J. Simpkins, 29 Wall, N. Y.
Ramsay	20,000	500,000	Township Ramsay, C. W.	C. W. Bryant, Boston.
Rochester	200,000	500,000		J. A. Ferguson, 8 Wall, N. Y
Rossie				24 Pine, N. Y.
Rosa Clara	100,000	1,000,000		H. Lathrop, 25 Nassau, N. Y.
St. Clair	100,000	1,000,000		H. B. Hawkins, 25 Nassau, N. Y.
St. Joseph	100,000	1,000,000	St. Francis Co., Missouri.	Jas. R. Knapp, 6 Broad, N. Y.
Shawangunk	100,000	500,000	Mt. Hope, Orange co., N. Y.	E. P. Ackerman, 48 Pine, N. Y.
Sussex	25,000	625,000	Sparta Town, Sus'x co., N. J.	F. H. Stow, 53 Cedar, N. Y.
Walkill			Orange co., N. Y.	W. A. Scott, 11 Wall, N. Y.
Warren			Warren, Grafton co., N. H.	J. S. Christie, 100 B'way, N Y
White Mountain			New Hampshire	111 B'way, N. Y.

SILVER.

COMPANY.	SHARES.	STOCKS.	LOCATION OF PROPERTY.	SEC'Y AND PLACE OF BUSINESS.
Amazon	25,000	$250,000	Nevada	W. L. Louther, 134 So. 3d, Phil.
Argentine	50,000	250,000	Argentine Dist., Colorado	D. L. Demmon, 134 State, Boston
Arizona	100,000	10,000,000	22 m W of Tubac, Arizona	J. B. Randol, 25 Nassau, N. Y
Astor	200,000	1,000,000	On Comstock Lode, Nev	J. Chapman, 71 Broadway, N. Y.
Atlantic & Pac.	50,000	1,000,000	Humboldt T, Hum't Co, Nev.	J. N. Sewall, 8 Broad st., N. Y.
Big Smoky	20,000	600,000	Smk'y Hill, Lander Co. Nev.	71 B'way.
Black Eagle	7,000	350,000	Carson, Owyhee co., Idaho	O. D. Gardner, 40 Maiden lane.
Bullion	200,000	1,000,000	Baunock, Montano	55 Liberty street.
Bush	50,000	500,000	Austin City, Nevada	176 Chambers st., N. Y.
Combination	5,000,000	50,000	Nevada	J. W. Stoute, Jr., 155 B'way, N.Y
Colorado Con			Cedar Hill Nevada	New York.
Columbia	30,000	3,000,000	Austin City, Nevada	J. E. Smith, 10 Pine street, N. Y.
Conn. & Nevada	120,000	1,250,000	Averill, Churchill Co. Nev.	49 Liberty street, N. Y.
Commonwealth	200,000	2,000,000	Gold Hill, Nevada	78 B'way, N. Y.
Cosmos	10,000		Owyhee Co, Idaho	137 Broadway, N. Y.
Del Norte & S'br			Lower California	New York.
Durango	5,000	500,000		W. R. Garrison, 73 W'm st., N Y.
East Bannack	100,000	200,000	Bannock City, Montano	J. Callender, 49 Ex. P., N. Y.
Empire G. & S.	100,000	10,000,000	Bodie Bluff, Mono	H. R. Gates, 191 Broad'y, N. Y.
Empire and Silver State	20,000	2,000,000	Reese River Dist., Nevada	57 B'way, New York.
Eldorado	500,000	2,500,000	San A 90 m s of Austin, Nev	208 South Fourth street, Phila.
Essex & Diadem	125,000	2,500,000	Sierra dis, Humboldt C. Nev.	A. R. Wetmore, 81 Vesey st, N.Y.
Franklin			Nevada	Philadelphia.
Gem	200,000	1,250,000		H. K. Gates, 191 B'way, N. Y.
Globe	100,000	500,000	Austin, Novada	J. W. Brazier, 26 Pine, N. Y.
Good Hope	20,000	1,000,000	40 m S of Austin, Nevada	80 Broadway, N. Y.
Huron			Montano	New York.
Incas	300,000	300,000	Summit co., Colorado	J. P. Whitney, 19 Lindall, Bost.
Knickerb'r and Nevada	20,000	2,000,000	Union Dis, Nye Co, Nev	H. R. Shotwell, 70 Cedar, N. Y.
Lander Hill			Nevada	74 B'way, New York.
Lincoln		1,000,000	Owyhee Co, Idaho	80 Broadway, N. Y.
Lw'r California	40,000	2,000,000	North Part of Lower Cal	55 William street, N. Y.
Madison	30,000	3,000,000	Nevada	W. W. Perkins, 71 Bd'way, N. Y.
Macedon			Nevada	Philadelphia.
Manhattan			Nevada	57 B'way, New York.
Merchants	30,000	600,000	Alturus Co. Idaho	157 Broadway, N. Y.
Metropolitan	15,000	1,500,000	Austin City, Nevada	158 Broadway, N. Y.
Morning Star	5,000	5,000,000	Owyhee County, Idaho	137 Broadway, N. Y.
Mount Vernon	500,000	5,000,000	Mount Vernon & Mammoth District, Nevada	New York.
Mount Vista	50,000	500,000		J. Chapman, 71 Bway, New York.
National	15,000	1,500,000	Owyhee Co, Idaho	115 Broadway, N. Y.
Nevada	100,000	300,000	Mountain Wells, D. Ch. co. Nev	323 Walnut street, Phila.
Nevada	20,000	1,200,000	Nevada	E. L. Bolles, 74 B'way, N. Y.
New Y'k & Ione	20,000	2,000,000	Ione City, Nye Co., Nev	71 Broadway, N. Y.
New York	1,500	1,500,000	Austin, Nevada	S. R. Hutchinson, 80 B'way, N.Y.
New York City	50,000	5,000,000	Gold Can Dist. Lander Co. N.	10 Pine street. New York.
New Y'k Dis'ct.	50,000	5,000,000	80 m f'm Austin, N. Y. Dis. Nevada	S. A. Hopkins, 71 Broadway, N Y
New Y'k & Nev.	10,000	1,000,000	Nevada	J. J. Osborn, 30 Pine street, N. Y
N. Y. & Owyhee		1,000,000	Owyhee Co. Idaho	6 Pine street, New York.
N. Y. & Oro Fino	10,000	1,000,000	do. do.	137 Broadway, New York.
N. Y. and Silver Peak	20,000	2,000,000	Nye County, Nevada	R. C. Root, 74 Broadway, N. Y.
N Y. & Santa Fe			Nevada	New York.
N. Y. & Washoe			Nevada	New York.
North Am. M'g.			Nevada	Philadelphia.
Ocean Transit		1,500,000	Lower California, Mexico, On Comstock Lode, Nev.	24 Pine, N. Y.
Ophir				
Pah Ranagat C'l.	50,000	5,000,000	Nevada	26 Pine, N. Y.
People's	100,000	500,000	Alpine & Sierra Counties	8 Pine street, New York.
Phœnix	200,000	2,000,000		48 East 26th street, New York.
Picacho	50,000	2,000,000	Arizona	T. H. Perkins, New York.
Pine Mount'n	30,000	3,000,000	Pine Mount'n Dist. Nev	F. K. McCulley, 100 Bd'wy, N. Y.
Pioneer & Inskip			Buena Vista Dis., Austin, Nev	15 Nassau street, New York.
Prescott	50,000	2,500,000	Arizona	T. H. Perkins, New York.
Presidential	125,000	2,500,000	Austin, Nevada	Wm. Lemmon, 17 Broad, N. Y.
Republic	15,000	1,500,000	Amador, D Lander Co. Nev.	67 Ex. Place, New York.
Revenue Exten.	50,000	500,000	Lander County, Nevada	W. L. Kite, 142 South 4th, Phila.
Rosario & Carmn	5,244	1,480,000	Sinaloa, Mexico	San Francisco.
San Antonio	60,000	3,000,000	Arizona	C. Lamson, 21 Nassau st., N. Y.
Seminole	7,000	1,500,000	Unionv., Humboldt Co., Nev.	L. G. Wilkin, 119 B'way, N. Y.
Silas Wright	60,000	600,000	Amador, D Lander Co, Nev.	18 Wall street, New York.
Silver Hill	40,000	1,000,000	Nevada	J. C. Hitchcock, 62 B'dway, N.Y.
Silver Series		1,000,000	Lander Co., Nevada	W. B. Rogers, 117 B'way, N. Y.
South Boise, T Co	200,000	2,000,000	Alturas Co., Idaho	A. M. Palmer, 19 Broad st., N. Y
Star Hill	20,000	1,000,000	Nevada	155 B'way.
St'h Cl' Crk			Colorado	Canastota, New York.
Stephenson	500,000	1,000,000	18 m E of Ft. Fillmore	A. S. Kellogg, 22 Pine, New York
Steptoe	20,000	2,000,000	Gold Can. Lander Co. Nev.	10 Pine, New York.
Sterling City		1,200,000		New York.
Tarshish	12,000	1,200,000	Toryabee Range, Un. D., Nev	H. S. M'Collum, 78 B'way, N. Y
Tempest	200,000	1,000,000		L. Bangs, 17 Nassau, N. Y.
Trumfo			San Antonio, Lo'wr Cal	San Francisco.
Toiyabee	50,000	5,000,000	Pine W'd, Mo'tn Dis, Nev.	J. M. Brown, 157 B'wy, N. Y.
Union & El D'o.	100,000	1,000,000	Mogul Silver Mo'tn	40 Park Row.
Upper Missouri		100,000	Montana	107 Broadway.
Vedder	21,000	2,100,000	Amador Dist., Nevada	L. G. Bingham, 80 B'way, N.Y.
Wamba Yuma	600,000	6,000,000	Arizona	35 William street, New York.
War Eagle	50,000	200,000	Owyhee Co., Idaho	G. M. Eldridge, 144 S. 4th, Pl.
Washington	22,500	2,250,000	Austin, Nevada	S. R. Hutchinson, 80 B'way, N.Y
White Mountain			New Hampshire	111 Broadway, New York.

COPPER.

COMPANY.	SHARES.	CAPITAL.	SITUATION OF PROPERTY	SEC'Y., AND PLACE OF BUSINESS.
Astor,	20,000	500,000	Michigan,	Pittsburgh.
Adventure,	20,000	1,000,000	Parts of Sections 30, 36, T. 51, N Range 38 W,	F. W. Chapen, 44 Ex. Pl., Boston.
Etna,	20,000	500,000	1226 A in Secs. 6, 7, 18, T. 58, N R 28, W Keweenaw co. Mich.	W. H. Smith, 51 Ex. Pl, N. Y. B. A. Hoopes, 324 Walnut St., Phil.
Alb'ny & Bost'n,	20,000	1,000,000	Secs 7, 8, 9, 10, 11, T. 55, R. 33	Fred. Beck, 43 City Ex., Boston.
Anita,	20,000	500,000	Del Norte co., California,	8 Wall St., N. Y.
Algomah,	20,000	500,000	W½ S, 30, T. 51, R. 37,	L. W. Clark, Boston.
Allouez,	20,000	500,000	Town 57, R. 32, Sec. 31,	Horatio Bigelow, Boston.
Amy gdi'yd'l.,	20,000	500,000	E½ Secs. 16, 21, T. 58, R. 30, NW¼ Sec. 5, T. 57, R. 31, 160 A,	F. H. Womrath, 324 Walnut St., Philadelphia.
Arcadian,	20,000	500,000	NW¼ Sec. 20, T. 57, R. 33, 160 A,	C. P. Dixon, 48 Pine St. N. Y.
Atlas,	20,000	500,000	NE¼ of E½ & NW¼ of NW¼ Sec. 31, T. 57, R. 31,	L. W. Clark, Boston.
Aztec,	20,000	500,000	W½ Sec 31, T. 51. N. of R. 37,	L. W. Clark, Boston.
Bay State,	20,000	500,000	SW¼ Sec. 29, T. 58, R. 31,	L. W. Clark, Boston.
Bohemian,	20,000	500,000	E½ Sec. 31, NW¼ Sec. 32, T. 51, R. 37, W,	R. H. Rickard, 21 Nassau St., N. Y.
Boston,	20,000	500,000	Michigan,	H. W. Warren, 60 City Ex., B'st'n.
Canada,	20,000	500,000	Brome co., Canada East,	H. P. Mount, 3 Hanover St., N. Y.
Calumet,	20,000	500,000	Michigan,	Boston.
Concord,	20,000	500,000	Michigan,	Boston.
Carp Lake, M.,	20,000	500,000	T. 51, N. R. 43, W. S½ of N½ of N. Sec. 14, and E½ Sec. 23, and NE¼ Sec. 23, 440 A.	W. H. Abel, 70 Wall St., N. Y.
Cascade, M.	20,000	500,000	SW¼ Sec. 9, T. 49, N. R. 39, W, in Ontonagon co., Mich.,	G. F. Riley, 35 Wall St., N. Y.
Copper Creek,	1,000	$100,000	Missouri,	H. M. Thompson, Missouri, Mo.
Copper Falls,	20,000	500,000	Sec. 14, T. 58, N. R. 31, W, Keewenah Point,	97 State, Boston.
Copper Harbor,	20,000	500,000	S½ Sec. 10, T. 58, R. 28, 320 A, Keewenah co.,	Fred. Beck, 43 City Ex., Boston.
Copper Creek,	20,000	500,000	Douglas co., Wisconsin,	T. B. Lawson, 71 Broadway, N. Y.
Central,	20,000	500,000	E¼ Sec. 23, T. 58, N. R. 31, W,	J. Stanton, Jr., 25 Nassau, N. Y.
Cornwall,			Strafford, Orange co., Vt.,	D. H. Whitney, 17 State St., B'n.
Continental,	200,000	500,000	Martinsburg, New York,	J. Sickles, 50 Ex. Pl., N. Y.
Corinth,	20,000	500,000	Corinth, Orange co., Vermont,	W. A. Cleveland, 191 B'way, N. Y.
Copper Hill,			Wisconsin,	Boston.
Dacotah,	20,000	500,000	Sec. 35, T. 55, R. 34, Portage Lake,	J. M. Cooper, Milk St., Boston.
Delaware,	20,000	500,000		S. M. May, 326 Walnut St., B'st'n.
Dorchester,	20,000	500,000	Michigan,	31 and 32 City Ex., Boston.
Douglas,	20,000	500,000	E¼ Sec. 30, T. 55, R. 3,	S. J. Edwards, William St., N. Y.
Dudley,				H. Bigelow 43, City Ex., Boston.
Eagle River,	20,000	500,000	T. 58, R. 31, Secs. 28, 29, 33, 34,	A. Lamson, 70 State St., Boston.
Ely,	00,000	500,000	325 A., Richmond, Canada East,	Ernest Sacchi, 82 B'way, N. Y.
Empire,	20,000	500,000	1798 A., Secs. 1, 2, 11, 12, T. 58, N. K. 23, W. K'w'n co., Min.	J. S. McMullin, 423 Walnut, Phil.
Eureka,	20,000	500,000	W½ Sec. 2, T. 49, N. R. 41, W. Ontonagon co.,	H. Shirley, 137 B'way, N. Y.
Evergreen Bluff,	20,000	500,000	NE¼ Sec. 6, T. 50, R. 38,	F. W. Capen, 44 Ex. Pl., N. Y.
Edwards'Copper	20,000	500,000	Michigan,	H. K. Thomas, 12 Wall. N. Y.
Eagle Harbor,	20,000	500,000	Michigan,	51 Ex. Place, New York.
Frue,	20,000	500,000	Michigan,	A. S. Kellogg, 22 Pine st., N. Y
Flint Steel R.,	20,000	500,000	Sec. 11, 12, T. 50, N. R. 39, W,	F. K. McCully, 157 B'way, N.Y.
Forest City,	20,000	500,000	320 A. NE¼ Sec. 36, and SE¼ Sec. 25, T. 51, R. 43,	J. F. Paul, 19 Phœnix Building, Boston.
Franklin,	20,000	500,000	¼ Sec. 24, T. 55, N. R. 31 W.,	C. Emery, 26 Kilby St., Boston.
Franconia,	60,000	300,000	New Hampshire,	J. Hauna, 162 Fulton St., N. Y.
French Creek,	00,000	600,000	Chester co., Pennsylvania,	R. Roberts, 19 Nassau St., N. Y.
Garden City,	20,000	500,000	SW¼ Sec. 60, N. W. Sec. 9, T. 58, N. R. 31 W,	R. H. Howe, Chicago.
Girard,	20,000	500,000	600 A. Sec. 15, T. 58, N. R. 28, W. Keweenaw co., Mich.,	B. A. Hoopes, 324 Walnut, Phil.
Gr'd Portage,	20,000	500,000	SW¼ Sec. 36, R. 34, W,	A. S. Kellogg, 22 Pine St., N. Y.
Great Western,	20,000	500,000	SE¼ Sec. 30, & SW¼ Sec. 29, T. 21, K. 320 A., Ontonagon	J. M. Cooper, 24 City Ex., B'st'n.
Hamilton,	20,000	500,000	SE¼ Sec. 35, S½ Sec. 36, T. 50, R. 41, SW¼ Sec. 21, R. 20, 14½ A.,	J. B. Townsend, 44 Exchange, N. Y.
Hancock,	20,000	500,000	SW¼ Sec. 26, Tract of Sec. 25, T. 5, R. 34, W.,	Fred. Beck, 43 City Ex., Boston.
Hanover,	20,000	500,000	Michigan,	do. do. do. do.
Hartford,	20,000	500,000	320 A. E½ & SE¼ Sec. 32, SW¼ & W½ Sec. 33, T. 50, R. 40, W,	T. M. Tyng, 61 Cedar St., Boston.
Henwood,			Michigan,	57 Broadway, N. Y.
Hope,	20,000	500,000	240 acres in T 57, R 32, Kw co.	19 Nassau St., New York.
Humboldt,	20,000	500,000	Sec. 21, T. 58, R. 31, W,	Hor. Bigelow, 43 City Ex., B'st'n.
Huron,	20,000	500,000	Sec. 2, T. 54, R. 34, W,	Hor. Bigelow, 43 City Ex., B'st'n.
Hilton,	20,000	500,000	Michigan,	W. H. Smith, 51 Ex. Place, N. Y.
Indiana Copper,	20,000	500,000	Michigan,	25 Nassau st.
Isle Royale,	20,000	1,000,000	NW¼ Sec. 1, T. 54, R. 34, W,	F. W. Chapen, 33 Ex. Pl., Boston.
Keweenaw,	20,000	500,000	Michigan,	F. W. Chapen, 44 Ex. Pl., Boston.
Knowlton,	20,000	500,000	SE¼ Sec. 1, W½ of SW¼ Sec. 1, and other lands,	44 Ex. Pl., N. Y.
Lafayette,	20,000	500,000	Secs. 25, 30, 36, T. T. 51, N. R. 43, and 44, W, Ontonagon,	P. C. Blancan, 35 Wall St., N. Y.
Lyster,	200,000	$400,000	Township Nelson, Canada East,	H. W. Nelson, 24 City Ex., B'st'n
Lower California	40,000	2,000,000	N. part of Lower California,	55 William St., N. Y.
Madison,	20,000	500,000	Part sec. 18, 19 entire, 30, 31.	Fred. Beck, 43 City Ex., B'st'n.
Merryweather,	20,000	500,000	Secs. 9, 19, T. 48, N. R. 4, W,	J. T. Waters, New York.
Mandan,	20,000	500,000	680 A. Secs. 8, 17, 19, 30, T. 58, N. R. 29, W., Keweenaw co., Min.	B. A. Hoopes, 324 Walnut, Phil
Manhattan,	20,000	500,000	W½ Sec. 11, NW¼ Sec. 14, T. T. 58, N. R. 32, W, 360 A.	J. W. Davies, 21 Nassau St., N.Y
Mendotta,	100,000	500,000		M. Taylor, 30 Wall St., N. Y.
Mass. M. Co.,	20,000	500,000	SW¼ Sec. 7, T. 50, N.R. 38, W,	J. M. Cooper, Pittsburgh.
Mesnard,	20,000	500,000	NE¼ Sec. 24, T. 55, R. 34, Calaveras co.,	L. Burr, 12 Phœnix B'gs, Boston.
Melones & Stan.,				606 Mont St., San Francisco
Minnesota,	20,000	1,000,000	Sec. 15, T. 50, N. R. 39, W,	S. M. Pond, 12 Pine St., N. Y.
Maryland,			Maryland,	Baltimore.
Medora,	20,000	250,000	Michigan,	Pittsburgh.
Michigan,	20,000	300,000	Michigan,	W. H. Smith, 51 Ex. Place, N.Y.
Merrimac,	20,000	500,000	NW¼ Sec. 34, T. 51, R. 38, W, Ontonagon,	J. M. Mills, 284 Pearl St., N. Y
National,	20,000	300,000	Sec. 16, T. 50, R. 39, W, 1,988 A,	J. M. Cooper, Pittsburgh.
Nequakeit,	20,000	500,000	Sec. 26, T. 51, R. 43,	Baltimore.
New Burra,				R. Roberts, 19 Nassau St., N. Y.
New Jersey Con.	100,000	1,000,000	New Jersey,	W. Bowes, 68 Wall St., N. Y.
N. Y. & Passaic,	100,000		Harrison, Bergen c.,	T. H. Belt, Jr. 23 William St. N.Y
New Devon,				T. H. Belt, Jo, do. do.
North Western,	20,000	300,000	W½ Secs. 24, 25, 26, E½ Secs. 36, 35, T. 58, N.R. 31,	17 William St., N. Y. J. M. Cooper, Boston and Detroit.
North Cliff,	20,000	200,000	Michigan.	Pittsburgh.
Norwich,	20,000	500,000	Secs. 11, 12, T. 40, N.R. 39, W, and other lands, 1,300 A.	P. C. Blancan, 35 Wall St., N. Y.
Ogima,	20,000	500,000	NW¼ Sec. 6, T. 50, N.R. 33, W.	G. E. Leffingwell, 7 Pine, N. Y.
Ontonagon,	20,000	500,000	631 A. Secs. 20, 21, 28, T. 50, N. R. 39, W. Rockland,	G. Hart, 11 Pine Street. N. Y.
Otisville,	100,000	500,000	Otisville, Orange co., N. Y.,	C. Windsor, 69 Wall St., N. Y.
Penn. Manuf'g.,	20,000	1,000,000	4,320 A. Secs. 13, 14, 15, 24,	
Petherick,	20,000	500,000	Michigan,	Boston,
Phenix,	20,000	500,000	Michigan, ½ Secs. 10, 11, 12, 23, 25, T. 58, N. R. 30, W,	Boston, S. M. Day, 326 Walnut St., Phil.
Pewabic,	20,000	500,000	W½ Sec. 25, T. 55, N.R. 34, W.	C. Emery, 39 State, Boston.
Pitts. & Boston,	20,000	150,000	Ts. 58, 57, N. R. 31, 32, W, 1,495 A.	H. A. Johnston, Pittsburgh.
Pontiac,	20,000	500,000	SE¼ Sec. 13, T. 55, N. S. 31, W.	C. Emery, Kilbey St., Boston.
Prescott,	100,000	1,000,000	Central Arizona,	69 Broadway, N. Y.
Providence,	20,000	500,000	240 A. in Keweenah co., NW½ Sec. 10, W½ NW¼ Sec. 10, T. 57, R. 32, W.	J. W. Davis, 21 Nassau St., N. Y.
Phila. & Boston,	20,000	500,000	640 A. Sec. 14, T. 58, N. R. 28, W, Keweenaw co., Mich.	J. S. McMullin, 423 Walnut St., Boston.
Quincy,	20,000	500,000	Sec. 26, T. 54, N. R. 34, W,	W. H. Smith, 51 Ex. Pl., N. Y.
Republic,	8,000	200,000		H. Baldwin, 70 Wall St., N. Y.
Reliance,	20,000	500,000	Secs. 21, 22, 27, T. 58, N. R. 28, W, 10,785 A.	H. K. Thomas, 11 Wall St., N. Y.
Rochester,	200,000	500,000		J. A. Ferguson, 8 Wall St., N. Y.
Rhode Island,	20,000	500,000	Michigan.	New York.
Ridge,	20,000	500,000	Sec. 35, T. 51, R. 38, W,	51 Exchange Place, N. Y.
Rockland,	20,000	500,000	Sec. 11, T. 50, R. 39,	S. J. W. Barry, 71 B'way, N.Y.
Resolute,	20,000	500,000	1,120 A. Secs. 7, 18, 19, T. 58, N. R. 29, W. Keweenaw co., Mich,	
St. Mary,	20,000	500,000		F. Beck, 45 City Ex., Boston.
St. Margaret,	200,000	1,000,000	Canada.	E. B. Sutton, 43 Pine, N.Y.
Saint Clair,	20,000	500,000	Michigan,	Boston,
Sharon,	20,000	500,000	Ontonagon co., Mich.,	P. C. Blancan, 35 Wall St., N. Y.
Sheldon & Col.,	20,000	500,000	SE¼ Sec. 36, T. 55, R. 34, W, SE¼ Sec. 34, T. 55, R. 34, W,	S. J. Edwards, 22 W'm. St., N. Y
South Side,			T. 58, 59, N. R. 28, 30 W.	H. W. Nelson, Boston. Copper Harbor.
Societe Fran'se,	10,000			S. J. W. Barry, 12 Pine St., N. Y
Superior,	20,000	500,000	W¼ Sec. 14, T. 50, N.R. 39, W.	H. W. Nelson, Boston.
Toltec Consol.,	24,000	500,000	Secs. 25, 26, R. 50, R. 36, Wisconsin.	17 William St., N. Y.
Ural,				
Vulcan,	20,000	500,000	1,120 A. Secs. 7, 17, 18, T. 58, N.R. 27, W. Keweenaw co.,	F. K. Womrath, 324 Walnut, Phil
Victoria,	20,000	500,000	Secs. 20, 29, 30, 34, 34, T. 50, R. 39, and other lands,	L. W. Clarke, Boston.
W. Minnesota,	20,000	500,000	Secs. 17, 18, 19, T. 50, N. R. 39, W.	C. T. Howard, Boston.
Wickopee,	100,000	500,000	Massachusetts.	G. A. Sneden, 12 PineSt., N. Y
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S, means section; T, township, R range.

AMERICAN
Journal of Mining.

[ILLUSTRATED.]

GEORGE FRANCIS DAWSON,
EDITOR

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NEW YORK, SATURDAY, OCTOBER 13.

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NOTICE TO CITY SUBSCRIBERS.

Through the carelessness of Boyd's Express, many of our city subscribers failed to receive last Saturday's JOURNAL ON MINING. Those who did not get it should let us know, and we will send them another copy. We shall hereafter deliver *all*, instead of only a portion, by a more reliable channel.

HOW MINING COMPANIES ARE RAISED IN NEW YORK—A QUEER "PROSPECTUS"

In order to illustrate the looseness with which some of our New York companies are gotten up, we will mention one, the prospectus of which is before us. This "prospectus" is a salmon-covered pamphlet of some sixteen pages, nine of which are devoted to by-laws, four to certificates of incorporation, names of officers, etc., and two and a quarter to the prospectus proper. Over a page of the latter is taken up with the number of claims, name of the district, mining and county certificates of record, and a statement that said mines are "near" a certain celebrated auriferous quartz district in California. The remaining page runs thus:

> The reserved twenty thousand shares working capital will be sufficient fully to develop the mine.
>
> A stamp mill, propelled by steam-power sufficient to drive twenty stamps, will be erected at the mine immediately, upon the completion of which, monthly returns of bullion will be made by the Superintendent.
>
> Immense tracts of timber surround the mine, furnishing an endless supply for fuel and other purposes at a small cost. There is also a ditch of water of large capacity running near the property, from which a supply for amalgamation, as well as sufficient to propel machinery (if requisite), may be obtained, thus facilitating mining operations in the two essential points, viz: wood and water, natural advantages so seldom met with in mines in general.
>
> The company, having a clear title to their property, and free from all incumbrances, feel justified in saying that the advantages and inducements offered for capital are unexcelled by any other property of this class, its location alone being sufficient guarantee of richness, located as it is in a district unparalleled for its mineral wealth, as shown by the amount of bullion shipped for exchange, as well as being easy of access and possessing superior natural advantages. The company have secured the services of a Superintendent, who resides at the mine and has had many years experience in quartz mining.

We look in vain for information as to the character of the mine—whether it is of gold, or silver, or copper; whether it is a placere mine, hill-diggings, or an auriferous quartz mine; whether the quartz (if it *is* quartz,) is rich or poor; what work had already been done, at what cost, and with what results? Even the poor comfort of a "big assay" seems to have been denied. The only "indications" as to the mine's character are that the company is called the ——— Gold Mining Company, and therefore, probably, has a gold mine; and that the Superintendent is recommended as having much "experience in quartz mining," and hence their gold mine is probably quartzose. Then, look at what statements *are* made! Vague, valueless; even worse than these! How did the Directors know when this prospectus was issued, that "the sale of 20,000 reserved shares" would be "sufficient fully to develop" a mine concerning which they seem to have known so little? How did they know that, upon the completion of a stamp mill, "monthly returns of bullion" would be made by the Superintendent? And how do we know that this very passage concerning bullion was not inserted to gull and defraud unsuspecting victims? Then, what a parade is made of timber and water, both of which are common enough in the portion of California where this mine is located! But the concluding paragraph is the most singular of all. In it the Directors assert that *because title is clear*, and there are no incumberances, they "*feel justified in saying that the advantages and inducements offered for capital are unexcelled by any property of its class!*" Was there ever anything written in any prospectus so absurd as this? A luminous justification, truly! And the inquiry in many minds upon reading the passage would be: "But which *is* its class? Wild-cat or what?" then they say in continuation of the above: "its location alone being sufficient guarantee of its richness, and located as it is in a district unparaleled for its mineral wealth, etc." Now the mine in question is many (say eight or ten) miles away from the celebrated district alluded to, and even were it "*in*" this district, what would that prove? It is full of rich mines, to be sure, but we have known any number of mines in the same district to *ruin* their owners—every experienced person knows that each mine must stand upon its own merits. But now comes the most remarkable part of this company's history. Upon the strength mainly of this prospectus—as we learn from inquiry at the company's office in Broadway—*eighteen thousand shares* (of the 100,000 of $5 par value) *have been sold at two dollars and upwards per share*, and referring to our back files we see that as much as $2,75 has been bid for it in the New York Stock Board! At their office they state that the reason why they didn't give more information in the prospectus was that they didn't want to put anything into it more than they were *certain* of—so that from a perusal of the document, we judge they were certain of *very little*. They say that they have since sunk 30 feet on their quartz lode (it *is* quartz) and the rock has yielded by actual working process $30 gold (so it *is* gold after all) per ton, and is getting richer, at a total cost of $12 per ton; that they have already at the mouth of the mine ready for reduction 250 tons of quartz; and that instructions have been sent out to purchase a mill. If the Company proves successful (and it begins to look like it) we shall be glad for the sake of those who have bought in; but we should think that persons must be very short of opportunities for investment, when they buy shares in such a raw, ill-digested mining scheme as this prospectus offered them.

NAME THEM!

The San Francisco *Mining Press* pretends to correct us by giving garbled extracts from, and endeavoring to put a wrong construction upon what we said (see page 296, vol. I. JOURNAL OF MINING) upon the subject of "mining reduced to a certainty;" and in one paragraph it says:

> Many of the most profitable quartz mines of California, producing hard rock, average less than $6 or $8 per ton. We have in view several of that character, one of which has been worked over twelve years, and is now worth upwards of $100,000.

In another, it adds:

> If our New York cotemporary will peruse the last issue of the *Press*, he will observe that Californians can mine and mill similar rock to that of the Black Hill mine for less than $1 per ton. There are scores of mills in this State crushing hard ores at a running expense of less than $1.50 per ton.

With regard to the former paragraph we can only say that the mining public of New York would be glad to see a list of "*many of the most profitable* quartz mines of California, producing *entirely hard rock*," that average "*less than* $6 *or* $8 *per ton*." Of late, a new process, in Mariposa, is said to have made the immediate profitable working of $3 rock in California possible, but that process *needs age*. Then as to the latter paragraph: We have failed to discover in the pages of the *Press* the item alluded to, and we hardly credit that our contemporary can name any *profitable working* California gold quartz mines, where the rock contains only $1 per ton. That there are some *few* mills in California whose running expenses on hard ores are but $1.50, is possible, but barely so. At all events, we prefer facts and figures to mere assertions; and hence request our contemporary to place the matter beyond argument or contradiction by giving, 1st, a list as called for above; 2d, a list of the profitable $1 per ton quartz mines of California; 3d, a list of California mills whose running expense on *hard rock* is only $1.50 per ton. We ask for the names, locations, etc., by all means.

THE CHEAPEST GOLD PROCESS OF ALL.

The subject of cheap and efficient processes in the saving of gold is one that, owing to recent remarkable successes, is now occupying a very large share of attention in the mining world. In Austria gold mines producing $5 to the ton of quartz, have long been worked with profit, and we believe $6 to $8 rock has for several years been made to pay in Nevada and perhaps elsewhere in California. More recently, as has heretofore been stated in the JOURNAL OF MINING, a new process has been tried on the Maripose Estate, California, by which it is believed that $3 rock can be made to pay a profit, and by which rock that had previously by other methods given but $6 was made to yield $32. We have also casually glanced at a statement made by an English mine engineer of some reputation, wherein he declares that in Australia quartz rock containing $1.12 per ton is profitably worked! In view of the immense importance of such results, we have obtained a manuscript copy of certain valuable extracts from Mr. Hopkins' report, and commence the publication thereof in this issue. They not only contain statements of *results*, but also of the *methods* by which such results are obtained, together with descriptions of the rock and various

processes for the extraction of gold most in vogue in various districts of Australia. We advise all persons interested in gold mining to read them.

Coal Mines of Michigan.

With her immense Lake coast, her prolific copper and iron mines, and energetic people, it is a wonder to us that her coal bed is not more extensively worked. The Michigan coal field is supposed to underlie an area of some 7000 square miles, but at present—so far as we are aware—there are only three coal mines being worked in the whole State, viz: One in Caledonia, Shearrassee county, yielding 1,200 tons per annum, and two at Blackman, Jackson county, producing 12,340 tons. Why is this? will the Michigan papers explain why?

SCIENTIFIC MEETINGS.

HEAT-CONDUCTING POWER OF MERCURY—MEASUREMENT OF RESISTANCE TO BE OVERCOME BY A MAGNET—PRODUCTS OF PETROLEUM.

At the meeting of the Polytechnic branch of the American Institute, last Thursday evening, a communication from a French *savant* was read, stating that mercury has twenty-eight times less heat-conducting power than silver.

Dr. Bradley exhibited instruments by which to ascertain the strength of magnet required to operate through a given quantity of ordinary telegraph wire (No. 8). He has graduated an apparatus so that he can show the resistance to be overcome in a length of wire from 4 to 1,200 miles.

Dr. Vanderveer, of Philadelphia, then gave an account of the products of petroleum, which excited great interest, and at times, animated discussion. He said that at present, having nearly exterminated the whales at the north pole, we were pursuing a similar course at the south pole in order to obtain sperm oil for the purpose of lubricating machinery, when we have, under our feet as it were, a far better lubricator than even unadulterated sperm oil; that this latter costs $3.00 per gallon, while the new lubricator, which is a product of undistilled petroleum, can be supplied at $1.50 per gallon. In selecting a lubricator the following conditions must be satisfied: It must not freeze; neither must it dry, as linseed oil will; nor contain fatty acid and glycerine, which will turn rancid, as lard oils will. It must be transparent. It must not evaporate. It must not be too thick to penetrate small interstices. The best density is 28° to 29° (Beaume'). It must not contain carbonaceous, nor other gritty particles. These conditions are fulfilled by a petroleum lubricator, which Dr. V. is now perfecting. Petroleum is essentially different from all other oils. It is composed of various oils containing equal parts of carbon and hydrogen, and these parts always in even numbers. You cannot make soap from it for there is no fatty matter. It will not oxidise. If you leave it as long as you please, there will be no film on the top. The first product of petroleum is distilled at a temperature of 40°, and is given off as the petroleum comes from the wells. It is compressed in an iron bottle, the pump being surrounded with ice and salt. This is named Kaimogene, by Dr. V., because it can be used as a cold-producer, benumbing readily any member of the body to be operated upon by the surgeon, as for instance in removing a finger-nail or a tooth; its use is much preferable to the present practice of subjecting the whole system to chloroform. At 60° another oil, Rhigolene, evaporates, and so on, the residuum being about four per cent. of coke. Dr. V. thinks (but he is not satisfied himself as yet) that as coal is the product of land plants, so petroleum is the product of sea plants, since it contains iodine and other substances peculiar to sea plants.

A lengthy discussion then ensued as to the possibility of petroleum, or substances combined with it, such as rags, sawdust, bone-black, etc., being spontaneously heated or set on fire. The experiments adduced seem to show plainly that this is scarcely possible, and that it is therefore on this account much preferable to ordinary lubricating oils. Finally, Dr. V. exhibited a large number of substances obtained from what are called the "waste products of petroleum," and which cost nothing at present but the carting from the works. Among them were: a burning fluid, hair oil, a substitute for castor oil, etc.

DIVIDENDS.

In Colorado Stocks a dividend on Savage is declared of $50 per foot; on Yellow Jacket, of $50 per foot; Empire Mill and Mining Co., $6 per share, payable at Lees & Waller; Clinton Oil Co., of 1 per cent., on 15th inst.; the Columbia Oil Co., of 4 per cent., on 15th inst.; Consolidated Petroleum Oil Co., of 2 per cent., payable at 19 Broad street, Oct. 15; Central Petroleum, of 1 per cent., at 8 Pine street, Oct. 15; Marine Oil Co. of Pittsburg, of 10 per cent.; Ralston Oil Co. of Pittsburgh, of 2 per cent.

MEETINGS.

Ticonderoga Iron Co., annual, at 24 Cliff street, on Oct. 17. Springfield and Deep River Coal and Mfg. Co., at 77 Cedar street, on Nov. 3, at 12 M. Washington Silver Mining Co., trustees, 71 Broadway, on Oct. 16. Hampshire and Baltimore Coal Co., election of directors, at No. 111 Broadway, on October 18th. North American Petroleum Co., election of trustees at 78 Broadway, on Oct. 16. McClintock & Cornwall Petroleum Co., election of trustees at 5 Howard street, Oct. 16. Tarentum Oil, Salt and Coal Co., at 116 Wall street, on Oct. 22.

Correspondence.

[*To insure insertion of Correspondence in our columns the full name and address of the writer must be given.*]

The Hazel Wand Question Again—A Thrust at "S." for Making Fun of It.

EDITOR JOURNAL OF MINING:

SIR—Your correspondent "S." in ridiculing the idea of water being found by means of a hazel rod, simply states that "superstitions will live. * * * * The soothsayer and confidence man is sought for to-day as much as in the days of yore before science had taught the multitude!" May I ask S. if he thinks that the scientific men of the present day can afford to laugh at any statement of facts in natural science when made by an ordinarily educated and truthful person. I know that our scientific men have advanced so far as to prove that man is developed from something less than an ape; but when, a few years ago, Sir Isaac Newton—in reviewing what he knew and what he did not know—compared himself to a child picking up a few pebbles from the strand, it seems to me strange that learned men are already adolescent in science, and can laughingly break to pieces a statement of fact. Why should it be more improbable that water has a sympathetic influence with other substances than that the touching one needle should affect another, three thousand miles away, or that an apple should fall to the earth? A century ago no one could say why they should do so, and people would have laughed at the one idea if presented, and to no one perhaps had the other idea occurred. As to the hazel rod, I have seen it used in Canada. Certainly it did turn over one particular spot in some hands, and did not turn in other hands, as, for instance, in my own; and certainly the parties experimenting were above the suspicion of fraud; and although I accounted for it by supposing that an involuntary tension of the muscles caused the rod to turn, I am by no means content to set down as ignorant and superstitious those in whose hands it did turn, who I know are wiser and better informed than myself. The letter of "S." suggests another idea: There perhaps never was an age in which jest and laughter predominated so much in lieu of arguments, as in the present. Is this also a sign that the world is growing wiser? S. JUNR.

NEW YORK, Oct. 8th.

Original Papers.

[WRITTEN FOR THE JOURNAL OF MINING.]

THEORY OF THE ORIGIN OF PETROLEUM.

By J. VAN CLEVE PHILLIPS, M. E.

[CONCLUDED.]

We find oil wells up and down the Ohio, about Portsmouth and Steubenville. In Western Virginia, also along the Cumberland river, and in Kansas. The great oil district at Titusville is geographically in a long finger of the coal measures that extend up the valley of the Alleghany river This district has been the theatre of a heavy denudation of coal measures and coal veins. The anthracite coals have evidently the same origin as the bituminous coals—that these were bent over anticlinal lines of axes, and doubled up in steep basins, and the country subjected to a denudation of a thousand feet or upwards; and the crystalline igneous action to which the coal was subjected, drove off the bitumen, and changed the soft coals to the harder anthracite. Wherever the bituminous coals have been disrupted by igneous rocks, the coal is hardened. D. D. Owen, in his survey of Arkansas, says: "Near Little Rock, where the coal measures abut against igneous rocks, the coal has an anthracite character. Petroleum and tar-springs are found oozing out along the anticlinal lines of axes that separate the coal basins along the Des-moines and Cedar rivers of Iowa; along the Missouri below Jefferson City; along the forks of the Osage in the great coal fields of Southwest Missouri, in Illinois east and south of St. Louis. The Devonian limestone near Chicago, where the noted Artesian well was bored 712 feet deep, had been quarried and used as a building rock in a Presbyterian church in the city some years ago, and was so rich in bitumen that it oozed out and ran down in streams several feet long over the walls of the building. This well is 100 feet altitude above Lake Michigan, the rock being full of pockets of bitumen and petroleum. The dip of this Devonian limestone is at a small angle south towards the coal fields, the rock at this point evidently showing geologically an outcrop of the great petroleum zone, or oil-bearing rock of the valley of the Mississippi.

If this theory should prove correct, the place to look for oil springs is where the coal strata have been elevated and a heavy denudation taken place, and the Devonian rocks are favorably situated to hold the oil. When lakes of bitumen are found, such as the one reported on in California, by one of the *savans* of the country, we may suppose that coal strata may have originally existed and been consumed, and the bitumen been preserved in receptacles in the rock. The oil zone will evidently dip and rise with the coal measures, following the anticlinal lines of axes of the coal fields—the Devonian series of rock being the *true* oil measures.

An analogous process to this driving out petroleum by the burning of the coal veins, can be seen in the yellow pine woods of South Missouri; tornadoes have swept through the pine forests, mowing a swath a mile wide. The fires run through the woods year after year, the trunks are burned over and decay, and the turpentine is all driven into the pine knots, which are protected by some process from the ravages of decay and fire. It appears that as the trunk was burned, the oil or turpentine was driven back by the heat, and preserved in the knots, which were unconsumed.

By the same general law, it may be supposed, as the coal veins were consumed the oil was driven back and caused to settle in the rocks, in reservoirs there prepared to receive it. Geologists have been in the habit of attributing fissures in the rocks to some volcanic action, or great elevating force from below—not considering that these fissures that bear lead or oil, are of so insignificant a character as compared to the thickness of the earth, that we should look for an explanation of them to some mechanical law. The lead fissures were first seams or splits in the limestone. These are from fifty to three hundred feet apart, and run parallel for miles. These cracks have had their walls eroded along particular planes in the lead measures, forming what the lead miner calls "openings;" these openings being filled with clay and sand and afterwards with lead ores. We must suppose that a somewhat analogous process has gone on in the Devonian limestone, along the lines of anticlinal axes of the coal fields, that this rock was fissured, and these fissures had their walls eroded and were formed by natural causes, as a receptacle for the oils. This erosion was probably carried forward by elements circulating with the water, that rapidly ate the limestone away. The supposition is, that the economic laws would not burn up the oil that once existed in the coal, and that it has been distilled, stored and preserved in this manner. The amount of oil in any given district of country being directly connected with the amount of coal veins consumed to produce it, that the oil belts will extend around and between the great coal fields of the central part of the continent. Some might oppose this theory from the fact that oil is lighter, and rises to the surface of water, yet it must be remembered that the condition of the planet, the heat and pressure of the air, may have been widely different at that era from what they are

at present. The Iron Mountains of Missouri are found very nearly in the geographical centre of the basin of the continent. We must not suppose that the earth at one era cracked open at this point, and that this ore was spewed out from some great subterranean reservoir of metals; but that each atom of iron has been piled there by the constancy of action of great economic laws connected with the distribution of the mining wealth of the continent. These laws being a part of the great system to explain the geographical position of the iron, lead, copper and coal wealth of this great basin. So with these oil belts; pipes come up at particular points from below, and run out tar, bitumen and petroleum, saying to the miner, "bore." The hematite iron ores of Pennsylvania are in places filled in canoe-shaped basins or fields, the ores being exposed at the ends and along the edges of the basin, while in the more central part a system of water sheds and impervious strata are necessary to protect the ores—they are deeper—and no ores are seen on the surface. So with the oil belts, surface signs will be thrown up, the oil-bearing rock in the ends of the system come nearest the surface, while in the more central fields it will be deeper, and show less surface signs. The probability is, that oil is stored up on a scale of magnitude somewhat similar to the iron and coal of this great valley, and that ages must pass before the belts will show any signs of being depleted of their unctuous treasures.

MARKET REVIEW.

FRIDAY EVENING.

Mining Stocks during the week have been irregular, and on the whole show an advance. American Flag fell to its old quotation of $3 85, and rose to day to $4 15. Burroughs Gold has further fallen to 75c. Church Union Gold has risen from $2 60 to $2 95. Benton Gold stands at $1 90. Boscobel Silver from $1 15 has risen to $1 30. Bullion Consolidated Gold has been active and risen from $4 85 to $5 25. Crozier has further declined to 80c. Columbian Gold and Silver has risen from $1 25 to $1 40. Consolidated Colorado inactive at 35c. Corydon has fallen back to $6 10. Downieville Gold has been active and risen from $2 00 to $2 05. Gunnel Gold has recovered to $1 26, with numerous transactions. Keystone Silver dropped from 18c. last week to 14c. today. Kipp & Buell maintains its rise to $2 30. La Crosse has further advanced to $3 20. Liberty and New York unchanged. Quartz Hill has fallen from $6 75 to $5 75. Smith & Parmelee has advanced from $11 90 to $13 90. Walkill Lead from $2 05 to $2 25.

Petroleum Stocks.—The sales have been light. Bennehoff Run has advanced to $7 10; Bergen Coal and Oil to 35c.; Bemis Heights $2 75; Rynd Farm from 26c. to 30c.

Coal Stocks—Show an advance.

	Offered.	Asked.
Pennsylvania Coal	155	158
Central Coal	56⅛	56⅜
Cumberland Coal, preferred	57⅝	57⅞
American Coal	60	61
Wilkesbarre Coal and Mining	64½	64½
Spring Mountain Coal	—	80

Government Stocks are slightly higher; 6 per cent. 1867, 138¾; reg'd '81, 112⅜; 5.20's reg'd '62, 105½; cou. large 113⅛; 10.40's reg'd, 99⅜; 7.30's 1st series, 106⅜.

Foreign Exchange is dull; bills on London at 60 days, 105½@106 for commercial; 106¼@107 for bankers'; at short sight, 107½@107⅝; on Paris at 60 days, 5.35@5.27½; Hamburg, 35@35¾.

Gold has been the subject of much and it is stated of unprincipled maneuvering; it rose yesterday to 153¾, falling after bank hours to 150¾. To day it has again risen, the price at 3 P.M. being 152⅞.

Silver is 6½@7c. below the price of Gold.

Copper is firm and moderately active. Sales 200,000 lbs. Portage Lake at 30½c., and Detroit 31c. Baltimore is nominal at 31c.

Iron.—There is considerable inquiry for Pig, while the stock is very small. Sales are noted of 600 tons Scotch, in lots, Eglinton, at $49; Glengarnock and Gartsherrie, $50@52. No. 1 American scarce at full prices. 50 tons Allentown, for December delivery, $50. Bar Iron is dull. The imports from Jan. 1 to Sept. 30, 1866, are:

	Bar.	Pig.	Sheets.
From foreign ports	17.605	40,835	369,823
Coastwise	2.352	2.453	38.136
	19.957	43.288	407,959
To same time in 1865	7.291	13,285	133,749
Increase	12,666 tons.	30.003 tons.	274,210

Lead is quiet and firm, with sales of about 200 tons Spanish at $7 per 100, and $6.85 from wharf; 20 tons refined German, to arrive, at $6 75.

Imports from Jan. 1 to Sept. 30, 1866:

From foreign ports	299.222 pigs.
Coastwise	5.387 "
Total	304.609 "
Same time 1865	133,151 "
Increase	171.458 "

Tin is very scarce, and the market is bare of English. Small sales are made at 21¾@22c. for Straits, and 25c. for Banca, all gold. Plates in fair demand, and roofing kinds very scarce.

	Pigs.	Plates boxes.
Imports from Jan. 1 to Sept. 30	75,561	615.312
Same time 1865	56,618	424,840
Increase	18.943	190,472

Spelter is also scarce, with tolerable activity. Small lots Silesian are selling at 6½c., gold.

Zinc.—A fair demand at 13½@14½c., currency, from store.

Petroleum is dull and heavy at 24@24½c. for crude bonded; 41@41½c. for prime L S to W; standard white, 42c.; free, L S to W, 58c.

THE COAL TRADE.

FRIDAY EVENING, Oct. 12th.

Wholesale.—There is very little to notice with regard to the trade during the past week. The market has been flat. There is actually nothing doing. Dealers feel satisfied that it is useless to push trade, and are waiting patiently for the inactivity to wear off. Doubtless prices will advance a little before cold weather sets in, but the large surplus already on hand will have a tendency to keep them down.

Retail.—The trade was very favorable during the early part of the week, but a leading company having last Thursday reduced its prices 75 cents per ton, again broke the market and brought trade to a stand still. The best qualities of coal are, however, fairly worth $8 00@$8 50 per ton.

Foreign Coal is quiet at quoted prices.

PORTSVILLE, Oct. 12, 1866.

The amount of coal shipped by Railroad this week is 42,973. By Canal 17,434. For the week 60,407. Same time last year 117,147. Decrease 56,740.

The returns of the coal traffic for the last week, as compared with those of the corresponding week last year, are as follows:

	1865.		1866.		
	WEEK.	TOTAL.	WEEK.	TOTAL.	INCREASE
Schuylkill Canal	36,374	735,820	17,434	1,047,329	311,508
Lehigh Val. R. R.	41,488	1,128,359	31,421	1,469,422	341,062
Del & Hudson	27,707	520,603	31,212	1,061,121	540,518
Scranton North	9,538	637,262	8,695	1,144,251	506,988
Scranton South	19,799		21,720		
Wyoming South	.....	191,683	.....	372,115	180,432
Pa. C. Co., by R. Road	.....	389,539	19,249	338,079	d'crease 51,460
by Canal	.....		830		
Phil. & Reading R. R.	80,775	2,303,339	42,973	2,969,535	666,196

Report of Coal Transported Over Lehigh Valley Railroad, Week Ending October 6, 1866.

Where Ship'd From.	WEEK. Tons. Cwt	PREVIOUSLY. Tons. Cwt.	TOTAL. Tons. Cwt.
Central Coal Co.			
Ashburton Co.		757 00	757 00
Mount Pleasant	314 00	18,752 03	19,066 03
Hazleton	4,646 16	164,493 08	169,140 04
East Sugar Loaf	4,348 17	149,389 12	153,738 09
Woodside Co.			
A. Pardee, Jr., Bro. & Co.			
Stout Coal Co.	907 08	37,159 15	38,067 03
Harleigh	521 15	41,710 12	42,232 07
Ebervale Coal Co.	1,469 15	44,583 13	46,053 08
Jeddo (G. B. M. & Co)	3,314 03	114,441 12	117,755 15
Highland Coal Co.			
Coxe, Bro. & Co.	771 04	13,230 06	14,001 10
Council Ridge	2,085 05	74,341 06	76,426 11
Buck Mountain	1,178 14	45,199 13	46,378 07
N. Y. and Lehigh	868 19	52,928 19	53,797 18
Honey Brook	566 14	105,815 00	106,381 14
Ger. Pa. Coal Co.	380 14	41,731 07	42,112 01
Spring Mountain	3,517 12	110,931 17	114,449 09
Coleraine	483 14	25,369 14	25,853 08
B. Meadow D. W.	63 04	1,732 12	1,795 16
John Connery	78 07	3,159 10	3,235 17
Lehigh Zinc Co.		7,464 10	7,464 10
J. B. Reber & Co.		6,542 08	6,542 08
McNeal Co.	685 16	49,028 11	49,714 07
Knickerbocher	103 14	22,318 02	22,421 16
Coal Run Coal Co		155 03	155 03
Rathbun, St'ns & Co.	1,191 04	31,076 11	32,267 15
Glendon Coal Co.	158 04	22,247 09	22,405 13
Mahanoy		10,935 14	10,935 14
Delano		24,920 01	24,920 01
H. Meyers		8,582 01	8,582 01
Trenton Coal Co.	55 15	129 16	185 11
Silliman	478 18	37,866 19	38,315 17
W. T. Patterson		220 12	220 12
Shamoking Coal Co.		1,817 12	1,817 12
Baltimore Coal Co.	896 18	26,769 00	27,665 18
Franklin Coal Co.	265 13	16,248 14	16,514 07
Audenried	64 12	13,843 03	13,907 15
Lehigh and Susq.	65 08	15,927 08	15,992 16
Germania Co.	138 07	8,182 02	8,320 09
Wilkes-Barre Coal and Iron Co.	590 00	49,707 02	50,297 02
Warrior Run	37 05	5,953 18	5,991 03
Parrish & Thomas	603 04	17,116 01	17,719 05
New Jersey	351 01	2,210 18	2,561 19
Union	129 19	572 15	702 14
Wyoming	54 14	2,153 19	2,208 13
Lehigh Coal and Navigation Co.			
Other Shippers	64 01	10,284 13	10,348 14
Total	31,421 14	1,438,001 01	1,469,422 15
Cor. week last year	41,488 13	1,086,871 04	1,128,359 17
Increase		351,129 17	341,062 18
Decrease	10,066 19		
Coal delivered at Mauch Chunk, and forwarded by rail	31,421 14		
Coal delivered on line of P. Haven and W. Haven Railroad	25 10		
At Junction and at Mauch Chunk for shipment by canal	6.568 12		
Total	38.015 16		

NOTE.—The Coal carried by Lehigh Valley Railroad Co., and delivered to canal at M. Chunk, in 1865, was not included in the published weekly reports of that year.

Little Schuylkill Coal Trade to Saturday, Oct. 6th.

	Co.'s Mines. Tons.	Railroad. Tons.
From December 1st, 1865	108,557	213,186
Same time last year	74.277	171,022
Increase	34.280	42,164
East Mahanoy R. R.		320,469
Last year		309,358
Increase		11,116
Increase on Railroads		53,280

SCHUYLKILL COAL TRADE BY RAILROAD AND CANAL for the week ending Thursday, October 10th:

	RAILROAD	CANAL.
From St. Clair	.....	.....
Port Carbon	8,318	.....
Pottsville	705	.....
Schuylkill Haven	7,948	.....
Auburn	.....	.....
Port Clinton	463	.....
Total for week	17.434	.....
Previously this year	1,029.895	.....
Total this year	1,047,329	.....
To same time last year	735.820	.....
Decrease	.....	.....

Prices of Coal by the Cargo.

At New York, Oct. 12, 1866.

Schuylkill Red Ash by Boat Load	$7 00@	$7 25
" Chestnut, " "	4 50	5 00
" White Ash Lump	6 25	6 75
" Steamboat	6 25	6 75
" Broken	6 25	7 00
" Egg	6 50	7 00
" Stove	6 50	7 00
" Chestnut	4 75	5 25
Lehigh White Ash Lump	6 75	....
" Steamboat	6 50	....
" Broken	6 50	....
" Egg	6 50	....
" Stove	7 00	....
" Chestnut	5 50	....
Western Virginia Gas Coal	10 00	....

At Philadelphia, Oct. 12, 1866.

Schuylkill Red Ash Prepared	$5 50@	$5 75
" Chestnut	4 00	.. ..
" White Ash Lump and Steamboat	5 00	.. ..
" Broken	5 00	.. ..
" Egg and Stove	5 25	.. ..
" Chestnut	4 00	.. ..
Locust Mt. Lump, Steamboat	5 25	.. ..
" Broken	5 25	.. ..
" Prepared	5 50	.. ..
" Chestnut	4 25	.. ..
Lorberry Coal	5 75	.. ..
Shamokin	5 75	.. ..
Franklin, (Lykens Valley)	6 25	.. ..
Broad Top	5 50	.. ..

Scranton Coal at Elizabethport.

Lump	$5 25@	— —
Steamer	5 50	— —
Grate	5 60	— —
Egg	5 75	— —
Stove	6 50	— —
Chestnut	4 75	— —

Prices for Pittston Coal at Newburgh.

Lump, per ton of 2240 lbs	$6 25	.. ..
Steamer, " " "	6 35	.. ..
Grate " " "	6 40	.. ..
Egg " " "	6 50	.. ..
Stove " " "	6 75	.. ..
Chesnut " " "	5 00	.. ..

70 cents per ton additional for delivery at N. York

Lehigh Coal at Elizabethport.

Lump	$6 75@	$7 00
Steamboat and Broken	6 50	— —
Egg	6 50	7 00
Chestnut	5 50	6 00
Stove	6 50	7 00

George's Creek and Cumberland Coal.

Run of mine, f. o. b. at Locust Point	$5 75@	.. ..
At Georgetown	5 50	.. ..

At Baltimore, Oct. 12, 1866.

Wilkesbarre & Pittston W A., wholesale	$7 50@	$7 75
" " " retail	8 50	8 75
Lykens Valley & Sunbury R A., wholesale	7 50	7 75
" " " retail	8 50	8 75

Prices of Foreign Coals.

[REPORTED FOR THE JOURNAL OF MINING.]
BY H. L. PARMELE & BRO.,
32 Pine street, N. Y.
Friday Evening, Oct. 12.

Liverpool Gas Caking	$10 75
" Cannel	14 50
" House "	19 00
" " Orrel	18 00

Per ton 2240 lbs.
PRICES FROM YARD:

Liverpool Orrell, screened	20 00
" Cannel, "	22 00

per ton 2000 lbs. delivered.

Prices of Provincial Coals.

[REPORTED FOR THE JOURNAL OF MINING.]
BY LOUIS J. BELLONI, JR.,
43 Pine street, N. Y.

Block House (on board)	$2 00 gold.
Gownie	2 00 "
Lingan	1 75 "
Sidney and Pictou	2 50 "
Glace Bay	2 00 "
International Co.'s	1 74 "
Slack Coal	75 "

Foreign Freights.

Sydney to N. Y.	$4 50
Lingan	5 00
Cow Bay	5 00
Glace Bay	5 00

Coal Freights.

From Newburgh.

Stamford	$1 35@		Greenbush	$ 55@	
Norwalk	1 35		Coeymans	50	
Bridgeport	1 35		Coxsackie	45	
New Haven	1 35		Stuyvesant	45	
New London	1 50		Hudson	40	
Norwich	1 65		Catskill	40	
Mystic	1 50		Saugerties	40	
Stonington	1 50		Barrytown	40	
Bristol	1 70		Rhinebeck	30	
Newport	1 70		Poughkeepsie	25	
Fall River	1 70		Fishkill Landing	20	
Providence	1 75		Cold Spring	30	
Dighton	1 75		West Point	30	
Warren	1 75		Peekskill	40	
Pawtucket	1 90		Haverstraw	45	
Boston	2 00		Sing Sing	50	
Troy	60		Nyack	50	
West Troy	60		Tarrytown	50	
Albany	55		Yonkers	55	
New York	70				

From Elizabethport.

New York	$ 70@		Portland	1 40@	
Fall River	1 40		Newburyport	2 10	
Newport	1 40		New London	1 40	
Boston	1 40		Pawtucket	1 60	
Norwich	1 40		Taunton	1 20	
Providence	1 40		New Haven	1 20	
Norwalk	1 15		Portsmouth	1 90	
Middletown	1 30		New Bedford	1 40	
Hudson	1 00		Bridgeport	1 20	
Lynn			Hartford	1 55	
Salem	1 40	2 10	Albany	1 00	

From Port Richmond, Philadelphia.

Reported by the Coal Exchange, Oct. 11.

Albany (& towing)	$1 70@		Neponsett	$0 00@	
Alexandria	1 60		Newark		
Appanoag	2 00		New Haven	1 80	
Aspinwall	7 00		New London		
Bangor	2 00		Newport		
Bath	2 40		Newport, R. I.		
Baker's Landing			New York	1 60	
Bedford			Norfolk		
Boston	1 75		Norwalk		
Bridgeport	1 60		Norwich	1 90	
Bristol	1 90		Parkshell		
Cambridgeport	2 40		Pawtucket, & tow'g	2 25	
Catskill (& tow)	2 00		Petersburg	2 00	
Charleston, S. C.	2 25	2 50	Portland	2 00	
Charlestown	2 10		Portsmouth, N. H.	2 00	
Chelsea	2 00		Providence	1 70	
Cohasset Narrows			Poughkeepsie, & t'g	1 70	
Davenport			Port Chester	1 60	
Dighton	2 00		Richmond	2 00	
Dorchester Point			Rockland	2 25	
East Cambridge			Roxbury	2 25	
East Greenwich	1 75		Saco		
Fall River	2 00		Saugus	2 50	
Fredericksburg			St. Johns (in gold)	2 00	
Georgetown	1 50		Salem	1 75	
Gloucester	2 00		Savannah, Ga	2 00	
Hudson			Stonington	2 25	
Jantown and tow			Troy		
Kennebrook Point			Washington, D. C.	1 50	
Lynn and dis	2 00		Weymouth't & pil'g	2 00	
Milton	2 50		West Point & tow	1 70	
Malden	2 50		Wilmington	2 00	
Medford			Winterport	2 00	

From Georgetown or Alexandria.

To Philadelphia	$2 00		Boston	3 00	
New York	2 25				

From Baltimore.

To Philadelphia	$1 75@		Boston	2 50@	
New York	2 00				
do by Canal	2 65				

Canal Expenses from Mauch Chunk to N. Y.

Lehigh Canal (net)	58
Delaware Division Canal	42
Delaware & Raritan Canal	50
Towage, New Brunswick to New York	25
Freight, Mauch Chunk to New York	$1 55
Total	$3 30

Freights on Coal to Elizabethport.

L. V. R. R. from Mauch Chunk to Easton	$1 15
C. R. R. of N. J., Easton to Elizabethport	1 70
	2 85
Shipping expenses at Elizabethport	25
Total	$3 10

Via Morris Canal.

Lehigh Canal	58
Morris "	90
Towage	12½
Freight	$1 80
Total	$3 40½

Expenses from Mauch Chunk to Jersey City for Reshipment.

Lehigh tolls (net)	— 58
Morris tolls	— 75
Freights	1 75
Reshipping	— 30
Total	$3 38

WEEKLY COAL TRADE CIRCULAR.

NEW YORK, Oct. 12th, 1866.

Trade still maintains its inactivity, although there are symptoms of a revival. It is expected to improve within the next fortnight, as the period of canal navigation is rapidly drawing to a close, and the dealers will soon be necessitated to purchase, to stock up their yards for the winter months, which will create a fair demand till navigation closes. Prices are not likely to advance much, as the Pennsylvania Coal Co. are offering their coal at retail, delivered to private families, at $7 25, which will prevent much if any advance at wholesale, over the rates now current, on the other varieties of coal. L. A. & Co.

FOREIGN MARKET REVIEW.

Weekly Metal Report.

LONDON, Sept. 21, 1866.

The metal market has again become very quiet, and the actual business reported is of slight importance, still prices have been fairly maintained.

IRON.—The demand for Welsh and Staffordshire iron is of an average character; prices are unaltered. Scotch pig-iron remains at 54s. 6d., cash.

COPPER.—The smelters still refuse to take orders at official quotations for raw, but they would accept those for manufactured. Tough cake and ingots have changed hands from second-hand holders, at a trifle over smelters' quotations. A fair amount of business has been done in foreign. Burra, £90; Wallaroo, £88 10s. to £100, according to prompt; Chili bars, £80 to £81.

TIN.—But little business reported. Straits, £80 10s. to £81, according to quality; Banca, £82 10s. to £83. English dull of sale. The price of Banca is, Holland, 4fl.

TIN PLATES.—Are in good demand, with an upward tendency.

LEAD.—Remains firm and in good demand.

SPELTER.—Transactions have been confined to small parcels for immediate consumption and export. Special brands outports, £20 12s. 6d. to £20 15s. VON DADELSZEN & NORTH.

Oil Trade Circular.

LONDON, September 21. 1866.

The change in prices of oils, etc., during this week are too little to notice. The imports to and exports from England continue very heavy. Should the imports decrease to any extent, we may expect prices to advance rapidly, as the demand from the Continent is extremely large and the home consumption on the increase.

REFINED PETROLEUM.—Liverpool and London, 1s. 11d. to 2s. 2d.

CRUDE.—Demand good at £17 per ton.

SPIRIT.—Sells freely at 1s. 3d. per gallon.

LUBRICATING OIL.—£10 to £20 per ton.

REFINED COAL OIL.—Of good quality meets ready buyers at 1s. 6d to 1s. 9d. per gallon.

ONCE RUN.—Buyers are offering £11 per ton in London for 1865 oil, but sellers refuse.

CRUDE.—£7 10s. to £8.

GREASE.—£5 to £16 per ton.

PARAFFIN WAX.—6d. to 1s. per lb.

DITTO SCALES.—2d. to 4d. per lb.

STRANGE BROTHERS & Co.

NEW YORK METAL MARKET.

(CORRECTED WEEKLY.)

COPPER	Ingot..Lake Superior, ₱ lb., cash	30½	31
	Baltimore	31	
	Pig Chili		
	Bolts	43	
	Braziers	42	43
	Sheathing	45	
	Yellow metal	32	
IRON—Pig	No. 1 Scotch, ₱ ton	49 00	52 00
	No. 1 American	50 00	50 00
	No. 2 "	45 00	46 00
	No. 2 Charcoal		
Bar	Swedish, ordinary sizes	170 00	
Amer. and Eng	refined	125 00	145 00
"	common	115 00	120 00
Rails, American currency			
"	English gold		
Horse shoe iron		150 00	160 00
Rods 5-8@3-16 rd. and sq		130 50	1[illegible] 0
Band		155 00	
Nail rods, 5-8 and 3-16		122 50	185 00
Hoops		160 00	223 30
Sheets, Russian, ₱ lb		28	0
"	English "	6¼	9
"	American "	25	25
Boiler Plates, English			
"	American		
STEEL	Best cast in bars, war	25	
	Best sheet cast, "	25	
	Best cast circular saw plates 46 in	31	
	Double shear steel, war	25	
	Single " "	22	
	Montague & Co. C. S., in bars	22	
	Round machinery cast	16	
	Best German	16	
	Government German	13	
	Eagle German	15	
	(L.) Blister, war	21	
	W. Jessop & Sons, blister, war	18	
	Double refined	26½	
	Stone Axe shapes	26½	
	Common blister	15	
	2d quality sheet	22	
	3d quality sheet	18	
LEAD	American, per 100 lbs		
	German Gold	6 80	7 00
	Spanish "	6 87½	7 00
	English "	6 87½	7 25
	Bar, per 100 lbs	10 50	
	Pipe and sheet	10 70	
TIN	Banca Gov., per 100 lbs. gold	25	
	Straits	22	
	English	—	
TIN PLATES	IC 10-14 prime charcoal	15 25	
	IX 10-14 " "	18 25	
	IC 12-12 " "	15 75	
	IX 12-12 " "	18 75	
	IC 14-20 " "	16 25	
	IX 14-20 " "	19 25	
	IC 14-20 Roofing ch. 1st	15 25	
	IC 14-20 " " 2d	14 00	
	IC 14-20 " Coke	11 00	
	IC 10-14 Coke	11 00	14 50
SPELTER	Lehigh, per lb., currency	11½	
	Foreign " gold	6¼	
ZINC	Mussulman & Amer	13½	
SOLDER	No. 1	24	
	No. 2	22	
QUICKSILVER			

SAN FRANCISCO STOCK MARKET.

Latest by Telegraph.

SAN FRANCISCO, Oct. 10.

Name.	Bid per foot.	Name.	Bid per foot.
Gould & Curry	550	Crown Point	925
Savage	1130	Yellow Jacket	725
Chollar-Potasi	100	Belcher	100
Ophir	175	Alpha	70
Hale and Norcross	1725	Imperial per share	80
Cal. Steam Navigation Co	—	Cal. State Telegraph Co	—

SPECIAL NOTICE.

☞ E. B. DORSEY is now stopping at the Everett House, New York, and will leave for California by the steamer of Nov. 1st, returning here again about the first of next January. See card in advertising column.

The Victoria Gold Fields and the Poor Rock there Worked with Profit.

We have several times of late alluded in the JOURNAL OF MINING to the report of Mining Engineer A. Hopkins, on the gold fields of Victoria, which owes its chief interest to the fact that such unusually poor auriferous quartz is there worked with profit. Through the kindness of a friend, who copied them from the report, we are now enabled to give some very interesting extracts therefrom, as follows:

When it was first announced that the Black Hill Company had succeeded in obtaining a satisfactory profit from quartz giving the very low average of two dwts. of gold per ton, the statement was received with some incredulity. Nothing less than an ounce per ton pays on Inglewood, and in Landhurst, quartz giving from five to six dwt. has been regarded as too poor to be worth much attention. But the achievements of the Black Hill Company were subsequently exceeded by the New Perseverance (a co-operative company of small capital, at work on White Horse Flat), who were stated to be content with 1½ dwt. per ton. These statements were undoubtedly true; but the circumstances were exceptional, and the result illustrates the proposition that quartz mining is reduced to almost certain calculation. I take as my proof the Black Hill Company, whose works are situated on the banks of the Yanovie, at the foot of the hill which gives the company its name. Here, erected with a paid-up capital of £24,000, the visitor will find the most complete and novel plant in the Colony. The engine is a horizontal one of 100 horse-power, and is placed in the center of the stamp-house. It drives six batteries of 10-stamps each, the weight of the stamps being 700 pounds, and they are worked by wrought iron disca, with steel faces and steel cams. The lifters are turned, and revolve in anti-friction metal guides. The quartz is supplied to the batteries by a self-feeding apparatus, requiring the attention of one man only to the sixty stamps, and is reduced sufficiently fine to pass through wire gratings at the back and front of the stamp-boxes, having one hundred and twenty holes to the square inch. A small quantity of quicksilver is put into each stamp-box twice a day. The crushed ore is carried through the gratings by the water into riffle-boxes containing mercury, extending from both sides of the battery, and then along some twenty-four feet of blanketing. These blankets are washed every eight hours, in tanks which move on wheels, and the material collected by this process is conveyed into revolving barrels, with half its weight of mercury and sufficient water for its perfect amalgamation. The mine consists of the principal portion of the Black Hill, and contains about forty acres. Tunnels nine by seven and a-half have been made into the hill at different levels, amounting in length to about 2,500 feet. These tunnels are connected at several points with the open workings at the top of the hill by shafts, down which the quartz and mullock are shot—the quartz being conveyed to the mill on iron trucks by railways, and the mullock carried to the waste heap. The average width of the quartz lode is about ninety feet, with numerous leads running into it. The quantity of quartz crushed per week is about 1,000 tons; and the yield of gold, for the three months preceding my visit, was two dwts. per ton. When the crushing shaft is soft, casings, however, from 1,500 to 1,700 tons can be got through—the average 1,500 tons. Cost for mining per ton is 4s., and for crushing 2s. 10d. The number of men employed is ninety, and of horses four; of firewood used per week, 150 tons. The company have erected a small iron foundry in which they cast the stamp-heads and other iron work required; and the average amount of iron to be renewed is about one ton weekly. The supply of water is obtained from the Yanovie creek, and is stored in reservoirs holding 1,500,000 gallons. A well, supplied from the reservoirs, is sunk in the stamp-house and from thence the water is forced by two pumps (thirteen inches in diameter, throwing 500 gallons per minute,) into a large tank on the side of the hill, holding 5,000 gallons, and from that point distributed by pipes to all parts of the establishment. The whole of the machinery was designed by, and erected under the superintendence of, Mr. I. S. Martin, engineer, of Melbourne, and the main portion of it was supplied by Messrs. Langland & Brothers, of Melbourne. The hill on which the company operate was a favorite camping ground in the early days of Ballarat, and around it the alluvial gave excellent returns. The Black Hill Company commenced upon it two years and a-half ago, with an engine of forty-five horse-power and twelve stamps. They followed the old plan of shafts and drives, and they found every ton of quartz they raised cost 13s. 6d. before it reached the stamps; a cost which exceeded, or at least equalled, the value of the gold it contained. It was calculated that 9d. per ton was added to the price every time the quartz was turned over in its progress to the mill. These various considerations induced the company (and the credit of an example of such practical value to the colony is mainly due to Mr. Edward A. Wynne, the chair-

man) to remove the smaller plant, and to substitute for it the great body of stamps they now possess, fed so ingeniously and with such little help that the price of quartz per ton has been reduced to the price already stated, less the cost of transfer through the tunnels to the feeding trough, or say 2½d. The whole hill is taken down from the surface in an open quarry-like work; and reefs and veins, the latter spreading out in every direction like the branches of a tree, are thus exposed to view, instead of being followed to long and badly lighted drives. The new plant was set in motion some eight months ago, but the first three months were consumed in experiments, improvements, etc., which need not be further referred to. It was only at the end of March last that the battery was fully and fairly at work, and I have before me the balance-sheet struck on the 30th of June, showing the result of three months; the gold produced in the previous quarter having been expended in completing the works left unfinished by the local firm, to whom the erection ot the plant had been entrusted in the first instance. The profits on the quarter ending in June was £1,689, or at the rate of 30 per cent. per annum; the amount actually divided was £1,559 11s. 8d., or £6 per share, leaving a balance to be carried forward. During the fortnight preceding my visit, 280 ounces and 4 dwt. were obtained, and the average profits of the company may now be set down at about £363 per month; equal to a return of the whole capital in three years and a-half—and that on quartz and casings returning only 2¾ dwts. It is calculated the hill cannot be cut down to the level of the stamps under a period of twenty years; and long before that day arrives the progress of invention may have introduced such better modes of reducing quartz and saving the gold, so as to make even poorer quartz a source of profit. Even then the company will have vast masses of quartz before them. The works are situated at a level of two hundred and twenty-four feet above that of the plant of the Wellington Gigantic Company, a few score yards distant, and that company is now working quartz profitably, taken in drives at fifty, one hundred, and two hundred and fifty feet beneath the surface. These lodes have been traced across to the Black Hill; and it is further found that the stone gets richer as it gets deeper. With such an example before us, may it not be asked: Where is the quartz or reef in the colony that may not be worked to a profit, if proper machinery is laid down for the work to be done, and resolution and perseverance under difficulties are shown, such as those the Black Hill Company has been piloted through?

[Continued in our next.]

Economy in the Production of Coal.

The best method of "getting" coal, is the subject of much inquiry at present among English coal owners. Among others, Mr. Warburton, in a paper read before the Manchester Geological Society, remarked to this effect: Suppose a lease of 300 acres of a seam of coal five feet thick, the quantity of coal therein we know is 2,250,000 tons; according to Mr. Vivian's account there would be a waste of one-third, leaving only 1,500,000 tons "getable;" according to Profes sor Ansted, of two-thirds, leaving only 750,000 tons; and although, according to common calculation, the waste would be only one-third, even that is little creditable to the mining profession; for, supposing the whole were "got" and would clear for interest and redemption 1s. 6d. per ton, it would amount to £168,750, while the most favorable estimate at present gives £33,750 less to be received, and Professor Ansted's estimate gives a reduction of £112,500—say $600,000—a formidable amount of loss on only 300 acres of land. Mr. W. thinks that this can be reduced to one-tenth, thus reducing the loss in value to £16,875. The principal waste in coal mines is caused by the coal being made unmarketable, by being reduced to dust. Of this dust, Mr. Bassett, of Cardiff, (Wales,) says there is as much as 35 per cent. Mr. Warrington, of Castleford, Yorkshire, says he has seen a case where 31 per cent. was wasted. If to this we add the quantity of coal left for pillars in some mines, we bring the waste to something approaching Professor Ansted's calculations. Of this waste the greatest amount is made by the "pillar and stall" working; for the more "strait" work there is, the more cutting, and consequently the more waste is made. "Take for instance, a strait place eight feet wide, in a five feet seam, let the miner prepare three feet for getting out, and you have 5×8×3=120 cubit feet. Ere the piece is got out, one foot of an average at each side must be cut out, or one side cut out and the other blasted, which, in point of producing small, is equal to both sides being cut. Then the coal must be "holed," or "curved," or "bared" a foot high of an average. Out of the 120 cubic feet you cut 5×3 & 5×3 & 8×3=54 feet; 120—54=66 of solid coal; but this has another operation to undergo, which, under favorable circumstances, will raise the small coal into full 55 per cent. It must be evident, then, the less of cutting there is the better will it be for the production of marketable coal. In this cutting of coal there is another very heavy drawback; it is considered the most laborious work in a colliery, and the men who do this kind of work are the cream of the miners; hence it comes under what our economists call *skilled* labor, and as such requires extra pay for its performance. Thus we have it as the phrase is, "cutting both ways:" cutting it into valueless rubbish, and paying extra for it. We may carry it still further, a point very commonly lost sight of. All this small coal has to be handled by the men, that is, it has to pass through all the processes of loading, wagoning, drawing, banking, and all the rest of it, as much as good marketable coal. This wasteful system is practiced in the largest coal districts in England and Wales; and besides, by this system, the line of cleavage is exposed, and the pressure or weight acting on its face, crushes the coal to dust. Mr. Warburton urges that coal should, under ordinary circumstances, be worked on the entire "long-wall" system, the working face at right angles to the line of cleavage, and that the "holeing" should be done in some accompanying stratum, and asserts that the loss would thereby be reduced to 10 per cent., which would include the coal left to support the shafts and the unavoidable waste from dust. Beyond this there need be little or no ungotton coal. The difficulty however in "getting" coal advantageously, seems to be more with the miner than the mineral. Each miner is wedded to the particular system to which he has been trained, and wherever he goes, carries his love for that system with him, and with difficulty adopts any other.

Origin of Petroleum.

At the recent meeting of the Society for the advancement of Science and Art, Dr. J. Sterry Hunt supposed—as to the origin of petroleum - that it is indigenous in two limestone formations, and that it may have thence risen and accumulated in overlying pervious strata, or in fissues capped or sealed by impervious beds, such as Pennsylvania sandrock or quarternry gravel beds. He was inclined to think, however, that petroleum may also be indigenous in certain sandstones of Devonian or carboniferous age, and referred to Lesley's observations to this effect, closely agreeing with those of Wall and Cruger in Trinidad, where fossil plants are sometimes found partly converted into petroleum and partly into lignite. Dr. Hunt regards the process by which animal and vegetable hydrocarbonaceous tissues are converted into solid or liquid bitumen, as a decay or fermentation under conditions in which atmospheric oxygenation is excluded, so that the maximum amount of hydrogen is retained by the carbon; and as representing one extreme of a process, the other of which is found in anthracite and mineral charcoal, the two conditions being antagonistic and excluding each other, and the production of petroleum implying, when complete, the disappearance of the organic tissue. Hence pyroschists, the so-called bituminous shales, and coal are not found together with petroleum, but in separate formations, and it is to be borne in mind that the epithet bituminous applied to the former bodies is a mistaken one, since they seldom or never contain any bitumen, although, like all fixed organic bodies, they yield hydrocarbons by destructive distillation. The fallacy of the notion which ascribes petroleum to the action of subterranean heat on strata holding the coal and pyroschists was exposed, and it was remarked among other arguments founded upon the impermeability of many of the petroleum-bearing strata, that the oil of the Trenton limestone occurs below the horizon of any hydrocarboneous rocks.

Welsh Gold Diggings and Sodium Amalgam.

The London *Times*, of Sept. 4th, says: Some three or four years since, it was generally believed that the auriferous quartz deposits of Wales could be worked to advantage, and that the quantity of gold that could be extracted would prove sufficient to make handsome profits. The temporary success of the Vigra and Clogau mines gave color to this opinion, and the promoters of gold-mining companies found but little difficulty in inducing the public to subscribe to their projects, without anything like a reliable inspection of the properties offered having been previously made. The new mines were vigorously worked for a time, but it was soon discovered that the quartz did not yield sufficient gold to make its working profitable. The quantity of gold raised in the whole of Wales during the year 1861 reached 2886 oz.; in 1862, 5299 oz.; in 1863, 552 oz.; in 1864, 2333 oz.; and in 1865, 1664 oz. The large decrease here shown indicates that gold mining is on the wane in the Principality, and the mines that continue to be worked give little hope of any increase in the returns. The general opinion prevails that until the inventive genius of the nation has produced a more perfect and economical means of production than is at present in use, Welsh quartz, although containing slight traces of the precious metal, will not be worked with profit. The London *Chemical News* publishes this, with a note by its editor, William Crookes, Esq., F. R. S., in which he says: "We have good grounds for stating that many of the gold mines in Wales which are now unworked, or worked at a loss, would at once pay a profit, were the sodium process of amalgamation introduced." To which we may add what seems to have escaped Mr. Crooke's attention, that experiments recently made in North Wales have already actually demonstrated, that thirty per cent. more gold can be saved by the use of sodium amalgam than without it.

Spontaneous Combustion of Coal on Board Ships.

The Committee of Lloyd's Salvage Association has issued the subjoined report upon this subject, which has caused the destruction of so many vessels: There are a great many opinions afloat relative to the cause of spontaneous combustion, some ascribing it to the chemical composition of the coal, others to the absence of ventilation, either natural or artificial, while others, again, consider it is caused by moisture. 1st. As to the chemical composition of coal. Owners know that one kind of coal is more liable to heat than another, and some will not ship that which is dangerous, but others are less scrupulous and ship all kinds. This might be partially checked by obliging owners to deposit at the Customs an analysis of the coals sent by them; they would be afraid of having any fire traced to their coal. But a better method is suggested by Mr. R Hunt, F.R.S., of the Museum of Practical Geology, in England. A machine has for some time been employed for washing away the iron pyrites or bisulphuret of iron from the small coal at the pit's mouth previous to converting it into coke. While the coal is in transit, the oxygen acts upon the bisulphuret of iron, and evolves great heat; consequently, if the iron pyrites were excluded, a great source of danger would be obviated. The cost is only about 6d. a ton for the washing, and would be amply set off by the lower rate of insurance consequent on greater security. Second. As to natural ventilation. It is chiefly small coal which heats, there being room in large kinds for the air to circulate between the lumps, but as the Chilian consumer requires small coal for smelting purposes, the only remedy is for shippers to send as large coal as can be used. Third. Artificial ventilation. Mr. Hunt proposes a method of securing this, but its efficacy has not yet been proved. It is to let down a pipe in the after part of the ship well into the coal, and to let down one in the fore part with the top communicating with the cook's galley; this would produce an up draught and keep down the temperature of the coal. Fourth. Moisture. Coals are in every way liable to get wet. At the pit's mouth they lay uncovered; in the wagons they are not in any way protected, the expense of tarpaulins being to great. While being shipped the hold is open to the weather, and at sea the hatches are frequently taken off, and the spray and sea air must necessarily dampen them. On the whole, the Committee commended to those connected with shipping coal that: Coal of undue fineness or damp coal should not be shipped. That a rod similar to those used in British ships should be used every twelve or twenty-four hours to ascertain the temperature of the coal. That the proposition of Mr. Hunt for artificial ventilation should be tried. That the coal should be washed previous to shipping.

Popocatapetl.

The city of Mexico correspondent of the *Times* writes of Popocatapetl: "This immense slumbering volcano has been recently re-explored by a party, at the head of which was Senor Don Juan Mugica. They report the crater accessible and inhabitable. Millions of tons of sulphur are lying in there, and in many places in a pure state. It can be carried to the summit of the volcano, and from thence to the base of that eternally snow crowned mountain, at an expense of only 50 cents the hundred pounds. The value of 100 pounds here is $10. The shortest distance through the base of this gigantic and snow-topped volcano is 38 miles. The crater could easily accommodate the cities of New York, Boston, Philadelphia with all their parks and drives. The Indians have been until now the only curiosity-seekers bold enough to ent r into the vast recesses of this great crater. No doubt further explorations will bring to light very many highly interesting facts. In December a party of scientific men are to visit the crater and thoroughly explore it. They are mostly students and teachers in the Schools of Mines of this city."

Gas for New York City from the Coal Regions.

A city paper states that a project is on foot for the construction of gas works in the coal regions of Pennsylvania, so as to supply New York City with gas at more reasonable rates than those now charged by the city gas companies. The plan is a good one, and if feasible, will prove a great relief to this city. It has already received the endorsement of some of the most eminent and practical engineers in the country, and it is thought that a few slight difficulties in the way of the enterprise can easily be overcome and the price of light cheapened. The conducting of gas

from the mines to the city by pipes, the mines being much higher than the city, is an obstacle which was thought could not be overcome; but it is proposed to obviate this difficulty by receiving the gas in New York by suction, instead of by pressure at the mines, and this will enable the work to be performed with small pipes. The expense of laying two sets of pipes a distance of one hundred and fifty miles will not, it is said, be much greater than the construction of a railroad of the same length. A capital of $10,000,000 will complete the works, including gas reservoirs in this city, and will, in the end, be a saving of millions to the inhabitants, inasmuch as it will do away with the immense expense and labor connected with the transportation of coal from the mines.

A Method of Extinguishing Fires.

In 1804 a coal mine in Scotland, which could not be reached by water, caught fire. It burned for thirty years, baffling all the efforts made to extinguish it, until finally, in 1834, an eminent engineer, Mr. Goldsworthy Gurney, undertook the task of putting it out. He covered all the openings of the mine, leaving only two holes, into one of which he forced steam, mingled with the products of the combustion of a coke fire, which generated impure carbonic acid and nitrogen. In six weeks the fire was extinguished, and then a new difficulty presented itself—how to cool the heated mine, so that when fresh air was re-admitted, combustion would not again begin. This was, however, effected, by spray of water with the jet of suffocating gas.

Transparent Metals.

Many years ago Faraday observed that light was transmitted through thin sheets of platinum, palladium, and rhodium, gold, silver, copper, tin, lead, iron, and aluminium. Recently Tasicke sought to determine the secret velocity with which light travels through metals, and found that it travels faster through gold and silver than through a vacuum; but none of these facts were so surprising as those shown by Deville, that both platinum and thick wrought iron tubes are often carried to a high temperature easily permeable to gases. So remarkable was the permeability of iron at a high temperature, that an iron tube filled with hydrogen gas before the experiment, was found at the end of two hours to hold only a trace of it.

Special Scientific Brevities.

☞ M. Girard, a French engineer, has constructed an experimental railway at the village of La Fouchere, between Paris and St. Germain, in order to make a practical test of the use of water as a motive instead of steam. This invention is a curious application of the principle that water lessens the friction between two metallic surfaces. In his system the wheels of railway carriages are replaced by iron skates, which differ only in shape and size from those used by skaters, and the mode of propulsion is thus described: Each carriage, instead of having four wheels, has four skates. The skates have a ledge on either side so as to fit on the rail, but not too closely. The upper part of the skate next the surface of the rail, is hollowed at its centre by a small groove; the groove is pierced with holes communicated with tubes leading to a reservior in the carriage, in which a mass of water is subjected, by means of compressed air, to a pressure of from seven to eight atmospheres. The turning of a tap establishes the communication between the reservoir and the skates; the water then rushes, as from a hydraulic press, through the holes in the grooves of the skates, and a layer of water is interposed between them and the rails, on which they are thus enabled to move as on the smoothest ice. The friction being thus reduced to a minimum, the tractive or propelling force can be greatly reduced.

☞ Sir D. Brewster, in one of the hardest of gems, topaz, found exceedingly volatile hydro-carbon. Subsequently Lowy ascertained that the green color of emerald was due to an organic substance. Knox demonstrated the fact that smoked quartz became colorless when heated. Wolf proved that the various colors of Fluor spar was due to a hydro-carbon. Even the reddish, yellowish or greenish color of some clays was found by Tournet to be due to organic substances. He cited the curious fact that certain clays, from a molecular change, in which he supposed jasper to have been produced, became not only colorless under the influence of heat, but gave off vapors which had a strong empyreumatic color. Lastly, Kuhlmann, in the act of seeking to demonstrate that the coloration of many gems and minerals may be traced to the presence of organic matters, succeeded in coloring colorless minerals; thus, for example, by plunging topaz, rock crystal and opal into melted pitch, he has given a yellow color to the topaz, and changed colorless rock crystal into the smoky quartz.

☞ Proof of the physical nature of photographic impressions have repeatedly been given of late, but here is the account of an experiment by Carey Lea, in the production of latent photographic pictures by mechanical pressure. He prepared and sensitized a plate, and having written upon a sheet of paper with a style, so that the letters would stand in relief in the dark, presses this paper on the sensitized leaf. From this on the application of the ordinary sun developer, he obtains a picture of the words. The light being excluded here, mechanical pressure alone effects the result. The experiment seems to accord perfectly with the emissive theory of light.

☞ In the refining of petroleum, or of oils obtained from the distillation of coal, etc., at low temperature, it is usual to add sulphuric acid as a preliminary process of refining; and Mr. Fordred, of Blackheath, England, has proposed to substitute a preliminary alkaline process, and the alkaline foots obtained are treated with steam, and on oil separated, which will be found useful in the arts. The oils thus obtained possess valuable drying properties, and may be advantageously employed in conjunction with boiled oil, and with such resinous gums and resins as may be soluble therein, and they may be used with paints and varnishes.

☞ The flotative power and air-sacs and hollow bones of a pigeon, when the contained air is raised to the temperature of the bird's body, is less than a grain weight—a fact which proves that birds are sustained in the air solely by muscular exertion. The air-sacs connected with the lungs are supposed to be for the purpose of keeping up a constant current of fresh air over the capillaries, which are naked in the lungs. They open and contract in alternation with the lungs—that is, they expand when the lungs contract.

☞ At a late meeting of the Austrian Society of Engineers grate-bars were shown which had suffered an expansion of 0·08 of a meter in every meter. This expansion had taken place not only longitudinally, but in all directions, and was ascribed to the transgression of the limits of elasticity by long application of a high temperature. Experiments are now being conducted for the purpose of ascertaining the laws in reference to this permanent "set."

☞ Under the name of the ozongene, M. Duplessis has produced an instrument like that in use for the continuous disengagement of hydrogen, but in which nitric oxide is generated by the action of nitric acid on copper turnings. A little of the gas being allowed to escape produces nitrous acid, which acts as a powerful disinfectant. A small instrument for domestic use might be made on the same plan as a Dobereiner's lamp.

☞ At one of the sittings of the French Association for the Advancement of Science, a new instrument called the liquometre was exhibited. It is intended for estimating the amount of alcohol in wines, and is based on the principle of capillary action. It consists essentially of a very fine graduated tube. The instrument is said also to give separate indications of the amount of tartar and extractive matter.

☞ The density of the moon is five-ninths less than that of the earth, while the second satellite of Jupiter appears, if we may place sufficient dependence on the determinations of magnitude and of mass, to be even actually denser than the great planet round which it revolves.

☞ A big gun, weighing 40,000 lbs. manufactured at Angoulême, has just been brought to Toulon for the iron-clad ship Taureau, which is about to try experiments with it. The Toulon papers say this gun will send a ball through the strongest ironsides in existence.

☞ Dr. Wollaston obtained very fine platinum wire by inserting a platinum wire in a small cylinder of silver, then drawing them both through a draw-plate, after which the silver was dissolved, leaving the platinum wire as fine as a spider's web.

☞ If the magnesian stones used in the manufacture of cement are calcined at too high a temperature, the hydraulicity of the material is destroyed. The product should be finely ground to improve the setting.

☞ In the third century of our era, at least 700 years before the introduction of the compass in the European seas, Chinese vessels navigated the Indian Ocean with needles pointing to the South.

☞ Mr. Graham observes, "It is believed that metallic pores, and indeed all fine pores, are more accessible to liquids than to gasses."

Mineral and other On-dits.

☞ About four miles from Suisun City, California, is a deserted quarry that yielded once the finest marble in the world. The quality was of the finest order, but the quantity was hardly sufficient to justify working it at the price of labor. The marble is of the finest texture, and colored with all the seven hues of light, woven into combinations matchless in their beauty. It is susceptible of a polish rivaling the famed Parian or Carrara marble, and were a palace built of it, it would outvie in splendor even the "glittering Parthenon" hewn from the Pentelicus. Some years ago, while operations were being carried on, a large block was sent to Paris, and pronounced, by the best judges, the most beautiful ever discovered. The largest and most brilliant block ever taken out was lost at sea while on the way to Europe.

☞ During the year 1860 the produce of the Cornish tin mines reached 9,752 tons, and the average price of refined metal was 128s. per cwt.; in 1861, 10,847 tons, price 123s. 2d. per cwt.; in 1862, 14,117 tons, price 119s. 4d. per cwt.; in 1863, 15,157 tons, price 122s. 6d. per cwt.; in 1864, 15,200 tons, price 110s. 7d. per cwt.; and in 1865, 15,084 tons, with an average price of 96s. 2d. per cwt. In the present year the supply has still further increased, and prices have further receded; but the stoppage of so many mines within the last two or three months has at last given a check to the downward tendency of the market, and there is every prospect that the tin trade is now about to enter upon more favorable times.

☞ M. M. H. Micolon, of Paris, proposes a new alloy for the manufacture of all metal articles—bells, hammers, anvils, rails, and non-cutting tools. The alloy consists of 20 parts of iron turnings or tin waste, 80 parts of steel, 4 parts of manganese, and 4 parts of borax; but these proportions may be varied. When it is desired to increase the tenacity of the alloy, two or three parts of wolfram are added. When the cupola is ready, the iron and steel are poured in, then the manganese and borax, and the vessel is filled up with coke.

☞ According to a report just issued by a select committee of the Canadian House of Assembly, the copper-bearing series on the north shore of Lake Huron extends over a surface of 2,000 square miles, and nearly the same extent of country on Lake Superior is endowed in the same manner. Iron is also found in considerable quantities.

☞ To Mr. William S. Mayo and Prof. Vincenzo Batta has been conceded the right to extract petroleum in various parts of the Province of Parma. The same privilege has also been conceded to a company, formed a few months ago at Genoa, to search for petroleum in the Provinces of Piacenza and Emilia.

☞ The Richmond coal fields, situated fifteen miles from the city of Richmond, Virginia, possesses more advantages than any other coal field in the United States for delivering coal in New York at low figures. The cost of mining and landing it in New York at present is about $3.75 per ton of 2,240 pounds.

☞ A mine containing gold, silver, lead and iron, has been recently discovered in the town of Granville, Addison county, Vt., on the land owned and occupied by Lorin Spaulding. It is supposed to be very valuable.

☞ There are but four smelting works in the United States devoted exclusively to that business, viz: Boston, Mass.; Detroit, Mich.; Portage Lake, Lake Superior, Cleveland.

☞ The gold shaft in the Dunkard region, Greene county, Pa., is slowly but surely progressing, and is now excavated to the depth of about one hundred feet.

☞ $1,500,000 in gold dust left Helena, Montana, on the 22d ult., under an escort for Benton, Mo. It was the product of a mining claim belonging to two persons.

☞ At last dates from Australia, there was a reported discovery of petroleum at Adelaide. It rose to the surface from a depth of fifty feet.

All Sorts.

☞ The *Messager du Midi* relates that recently, during a jousting match on the sea at Toulon, a small boat which was engaged in picking up the dropped lances was struck and upset by a large fish, supposed at first to be a tunny strayed from the roadstead, where a number of them had been seen. But afterwards an enormous fish, at least twelve feet long, was chased into one of the docks, where it still remains.

☞ The trade in roses, as is well known, is of considerable importance in France. Rose trees are cultivated in different parts of the country in open fields, just as turnips or cabbages. Thus, there are 500,000 rose trees near Orleans; 200,000 near Metz; 1,000,000 near Angers; 1,500,000 near Lyons; 2,000,000 near Paris; and 2,000,000 in the thirteen communes of Brie-Comte-Robert.

☞ Certain parties in the city of San Francisco are in the possession of a process of hardening wood, which, if successful, is designed to make a revolution in the use of woods. It is contended that the process to which common red wood will be subjected will make it as durable as iron, and capable of receiving a polish equal to rosewood or mahogany.

☞ "A little more animation, my dear," whispered Lady P—— to the gentle Susan, who was walking through a quadrille. "Do leave me to manage my own business, mamma," replied the provident damsel. "I shall not dance my ringlets out of curl for a married man." "Of course not, my love; but I was not aware who your partner was."

☞ The hog cholera is prevailing to an alarming extent in the vicinity of Rockford, Ill. The lungs of the hogs that die are found gorged with blood, and dark colored. Charcoal and Sulphur have been found efficacious as preventatives, and bleeding the effected ones has given relief in many instances.

☞ The bamboo, which grows abundantly in most of the West India Islands, has been for some time past largely exported from Jamaica to New York in bales and bundles for the purpose of being manufactured into paper, and has been proved equally as valuable as rags.

☞ In the Indian railway trains a considerable number of passengers are found dead in the carriages. Death is supposed to be caused by the effects of the great heat upon persons who undertake journeys and religious pilgrimages, when physically unfit for the exertion.

☞ Such is the price of land in Paris at the present time that some speculators are about to build houses eleven stories high! They seem to have found out that air is very much cheaper than land. An hydraulic apparatus will be attached to the premises.

☞ The total earnings of railways in the United Kingdom amount to a good £50,000,000 a year, and if we allow even 50 per cent. for working expenses, there will remain £20,000,000 t. represent profits.

☞ A man about town was lately invited to a sewing party. The next day a friend asked him how the entertainment came off. "Oh, it was very amusing," he replied; "the ladies hemmed, and I hawed."

☞ In the country west and northwest of Dayton, Ohio, the rats are said to be swarming, and apparently migrating southward, an indication of a severe winter.

☞ It is stated that David was a Larkeeper, and Goliah a tanner, because David fixed a sling for Goliah and the latter got slewed with it.

☞ The State auditor of Iowa reports that there are 1,853,310 sheep, 700,503 cattle, 312,052 horses and 61,214 swine in that State.

☞ A cow died in Maine, and a piece of hoop-skirt was found in her throat. It is supposed she swallowed the milkmaid.

☞ When a feller gits a goin' down hill, it duz seem az tho' everything had been greased for the okasion.

☞ Bismark and Mr. Motley, United States Minister at Vienna, were schoolmates in Germany.

☞ The cattle plague, as well as the cholera, is devastating Hungary, Moravia, and Gallicia.

☞ The subject of steam street railroads for this city is attracting marked attention.

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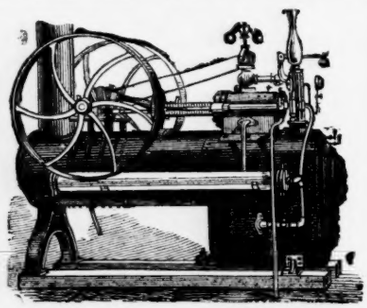

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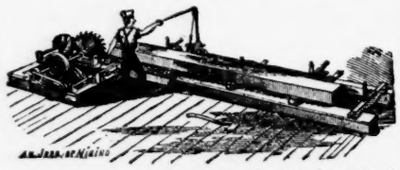

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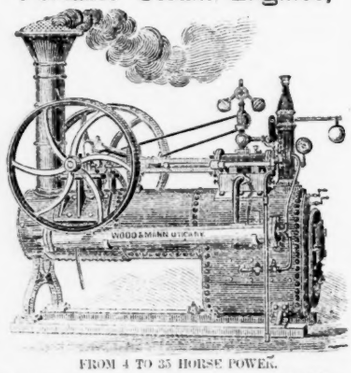

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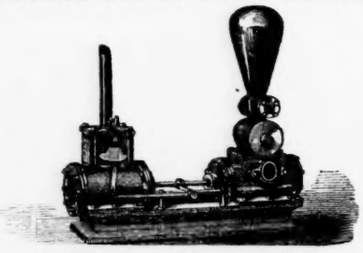

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